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AUTHOR Miehle, Caroline
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ABSTRACT

This guide provides an overview of the language process, with sections focusing on the physiological aspects (organization of the brain), language development, environmental variables, cognition, language deficits and evaluation, language remediation, and implications of the reading process. Appendixes provide selected listings of developmental language scales, comprehensive tests of language, tests for assessment of receptive and expressive language behavior (semantic, syntactic, and phonological); a reading checklist; suggestions for developing inner vocabulary, language usage, and word retrieval; suggestions for parent involvement at home; and a listing of functional words and phrases. (HOL)

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Do You Get My Meaning?

By Caroline Miehle

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PREFACE

"Do You Get My Meaning?" represents the thinking Caroline Miehle has done about the language process. Through her experiences in Special Education with the Welland County Roman Catholic Separate School Board and in her doctoral studies at State University of New York, Caroline has acquired insights into how children learn to think, speak, and read.

Through publishing and disseminating Caroline's work, staff at Niagara Centre hope to provide selected educators with resource material to further their understanding of language. Perhaps even more important will be the constructive comments these educators forward to Caroline.

Often, teachers, counsellors and consultants develop resource material to assist them in their work. Frequently, other educators have a genuine need for such resource material but are largely unaware that it is available. Similarly, many educators develop units and lessons or design teaching aids, never to have the benefit of constructive criticism.

If you are a speech consultant, a remedial teacher or a teacher of language arts working in the Primary or Junior Divisions, we encourage you to read Caroline's work and to forward to her your professional response.

Dr. J.R. Bruce Cassie
O.I.S.E., Niagara Centre

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Language encompasses far more than words spoken. The words uttered represent an intricate internal and external relationship of which they are the products. The words spoken, upon their production, set up still more complex relationships of an internal and external nature.

In this section, the writer will attempt to represent a view of the gift of language.

The physiological, and cognitive developmental characteristics will be discussed. Environmental variables as they influence language will also be included. Language development breakdown, its evaluation and remediation, along with the implications on the process of reading, will conclude the section.

AN OVERVIEW

One of the greatest gifts given mankind is that of speech. Henry Wadsworth Longfellow said, "The human voice is the organ of the soul." In the process of communication we can praise God or curse our fellow men: we can attract or distract: we can charm or irritate; we can inspire admiration and love, or create discord and hate. We present both our affective and intellectual reactions and receive feedback through both from our audience. With communication we can carry a full and rich response to the world being much more than a mere description.

Man's mental and cultural development has come about primarily because of language. Without it, humans would not have advanced beyond an extremely primitive stage. A need to communicate appears to have stimulated the small brain of primitive man to grow. Stimulation of the cognitive structure led to descriptive language which led to argumentative decision-making language, facilitating the development of logic, language and culture. The need or motivation, however, grew from perhaps an intrinsic urge spurred on by the socialization process.

One doesn't inherit language, rather one has the potential for it. A newborn baby has the potential for any human language. Through this vehicle the sum and substance

of man's culture and civilization has to be transmitted.

Some intellectual life depends on possession of a store of meanings, the importance of language as a tool of preserving meanings cannot be overstated. Without words as vehicles . . . no cumulative growth of intelligence would occur. Experience might form habits of physical adaptation but it would not teach anything, for we would not be able to use an old experience consciously to anticipate and regulate a new experience.

(Dewey, 1933, p. 234)

Communication and storage of these signals and signal systems in the brain have resulted in the complex - man-made environment with its traditions, its culture and its language. (Moerk, 1977, p. 5)

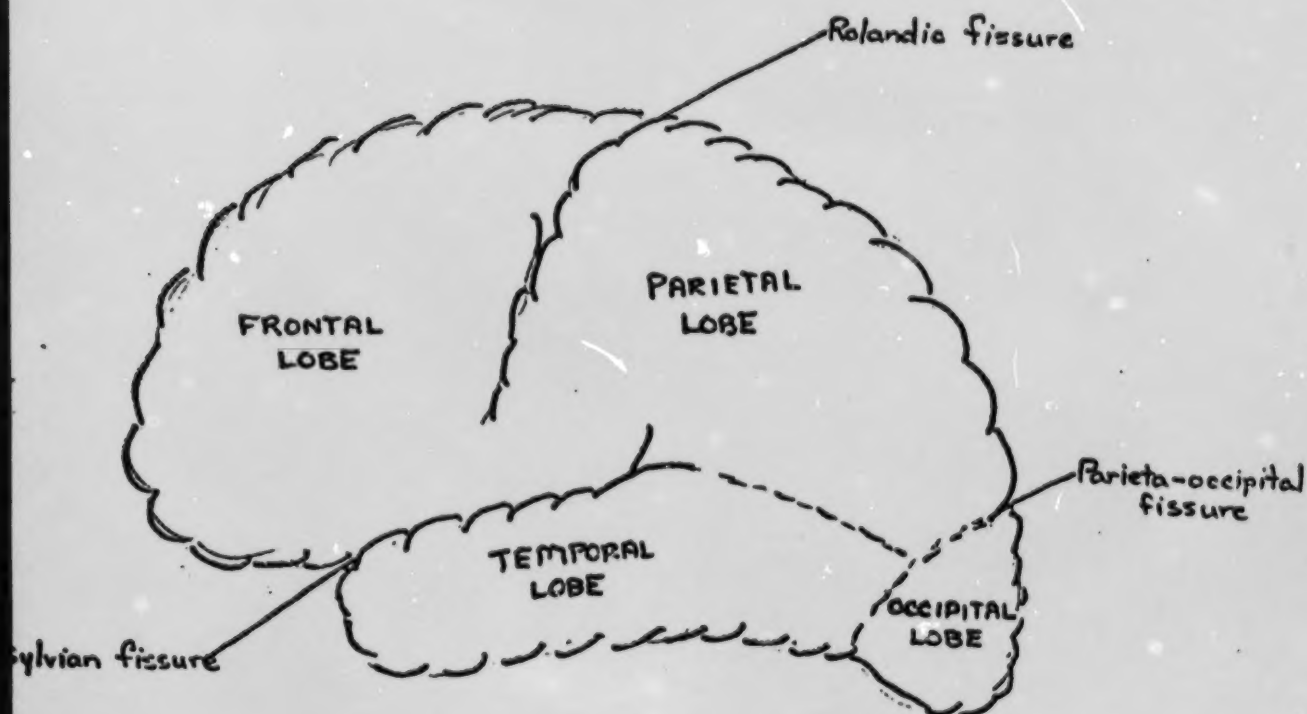
A child's intellectual landscape is like a meadow in a dense fog. Nearby objects are clear. Those next removed in distance are dim. Remote ones are in a light of mystery. Beyond that lies the great unknown. The child unquestionably perceives the world through a mental fog. But as the sun of experience rises higher and higher, these boundaries are beaten back. (Chambers, 1904:30; Moerk, 1977, p. 84)

PHYSIOLOGICAL ASPECTS

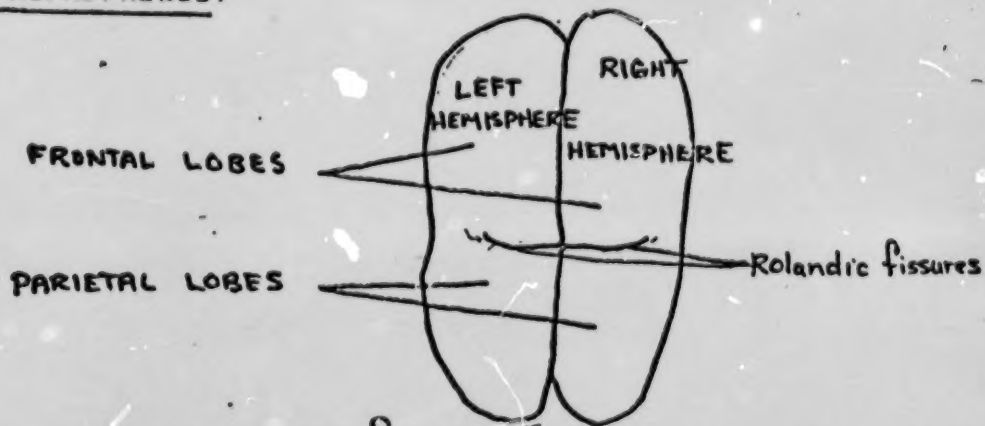
The organization of the brain and its development are areas of research which are slowly being understood. The diagrams following provide general geography.

GENERAL GEOGRAPHY OF THE BRAIN

LATERAL VIEW OF LEFT HEMISPHERE



TOP VIEW OF BOTH HEMISPHERES.



The brain being a very complex system will be discussed physiologically only in relation to language.

The brain is divided into two cerebral hemispheres. These are connected by fiber tracts known as commissural fibers. Each hemisphere is divided into four major areas known as the frontal, parietal, temporal and occipital lobes. The brain, enclosed in membrane, is characterized by sulci or grooves over its surface. These numerous sulci do not go through the thickness of the hemisphere. Three fissures of particular prominence appear to divide the hemispheric areas. The fissures are, the Rolandic fissure which marks off the frontal and parietal lobes, the Sylvian fissure marking off the temporal lobe from the frontal and parietal, and the parietal-occipital fissure marking their division. Fissures are somewhat different from sulci in that they have a counterpart on the underside.

The frontal lobe, appears to maintain the integrity of the personality as well as the intellect. The temporal lobe appears to have auditory functions. The parietal lobe seems to play a role in spatial awareness as well as discriminatory functions involving size, shape and texture. The occipital lobe has visual functions.

The usual indices of physiological maturation of the brain are differentiation of cells, myelinization of nerve fibres and spontaneous cortical activity.

The outer layer of the hemispheres is gray in colour and is known as the cerebral cortex. It contains

an estimated 14 billion cells with about 200 million incoming and outgoing projection fibers. The possible combinations therefore would seem to be almost infinite. The subcortical connections which relate the cortex to the brain stem are indispensable and are of major importance in realizing the integrations required for speech. A large nuclear mass centrally located, called the thalamus, plays a key role in the integration of the neural systems.

Messages are transmitted in the form of electrical impulses. These have been identified as alpha, beta and delta rhythms.

A steady blood supply maintains functioning. The following chart indicates the vessels which service different regions and the deficit which results due to occlusion.

TABLE 1. BLOOD SUPPLY TO THE BRAIN AND NEUROLOGIC DEFICITS FOLLOWING OCCLUSION OF MAIN VESSELS

<i>Main vessels</i>	<i>Region supplied</i>	<i>Neurologic deficit following occlusion</i>
I Internal carotid	Most of the cerebral hemispheres, hypophysis	Contralateral hemiplegia Contralateral hemianesthesia Aphasia Hemianopsia or ipsilateral blindness
A. Branches of internal carotid		
1. Anterior choroidal (ligation often fails to elicit obvious neurologic deficit)	Optic tract Cerebral peduncle Lateral geniculate body Posterior 2/3 posterior limb of internal capsule Infralenticular and retrolenticular portions internal capsule	Hemianopsia or upper quadrant defect Contralateral hemiplegia Partial thalamic sensory changes
2. Ophthalmic	Orbit and surrounding tissue Muscles and bulb of the eye	Unilateral blindness Otic atrophy
3. Anterior cerebral	Rostrum of corpus callosum Septum pellucidum Lower part of head caudate nucleus Lower part frontal pole of putamen Frontal pole globus pallidus Anterior limb internal capsule Orbital surface frontal lobe Superior frontal gyrus Cingulate gyrus Upper part of precentral gyrus Precuneus, adjacent lateral surface of the hemispheres	Spastic monoparesis of the contralateral lower extremity Contralateral forced grasping and groping Cortical type sensory defects Transient aphasia Sluggish mentality, dementia Incontinence of bowel and bladder

TABLE 1. (Continued)

Main Vessels	Region supplied	Neurologic deficit following occlusion
4. Middle cerebral	Putamen except for lower anterior pole Upper part head and whole body caudate nucleus Lateral part globus pallidus Internal capsule above level globus pallidus Inferior and middle frontal gyrus Lateral part orbital surface of frontal lobe Precentral and postcentral gyri Lower part superior parietal lobule Supramarginal and angular gyri Lateral surface of the temporal lobe	Contralateral hemiplegia Contralateral cortical sensory deficit Hemianopsia Severe aphasia (if dominant hemisphere involved) Stupor
B. Branches of middle cerebral		
1. Pre-Rolandic branch		Contralateral lower facial and hypoglossal weakness Aphasia with dysarthria (if dominant hemisphere affected) Contralateral monoplegia
2. Anterior parietal branch		Decrease in deep sensibilities Ataxia Contralateral slight spastic hemiparesis
3. Posterior temporal and angular		Contralateral hemianopsia Severe aphasia
4. Posterior parietal and angular		Hemianopsia Contralateral cortical sensory defects Severe aphasia
5. Rolandic artery		Contralateral hemiplegia
6. Basilar branches		Total contralateral hemiplegia
II Vertebrobasilar system		
1. Posterior cerebral	Third temporal gyrus Fusiform gyrus Hippocampus Uncus Lingula Cuneus All occipital gyri Part thalamus Cerebral peduncle Superior cerebellar peduncle	Quadrant-anopsia or hemianopsia Bilateral central scotoma Cortical blindness (both branches involved) Aphasia Contralateral mild hemiparesis Contralateral cerebellar ataxia Thalamic syndrome
2. Basilar	Pons and territory supplied by posterior cerebral	Quadriplegia Dysphagia Diplopia Stupor or coma Dysarthria Rarely unilateral or bilateral deafness visual field defects or blindness, etc.
3. Vertebral	Medulla Posterior inferior region of cerebellum Cervical portion of spinal cord	Dysphagia Dysarthria Hoarseness Ipsilateral cerebellar ataxia Contralateral or bilateral hemiparesis Contralateral hypaesthesia, Ipsilateral facial hypaesthesia, etc.

The neurological components related to language are best described, to this point, by research in the discipline of speech pathology or more specifically, aphasia. The names found frequently in the literature are Broca, Wernicke, Flechsig, Lichtheim, Bastian, Jackson, Freud, Head, Goldstein, Weisenburg and McBride, Wepman, Eisenson, Luria, and Penfield and Roberts.

In the area of assessing functions, Wepman, Porch and Schuell are prominent. The research done by each cannot be covered at this time but some of their findings are of particular interest.

Early research was based upon patients who had suffered stroke, accidental cerebral insult or upon animal studies. The data was, therefore, insufficient and relatively scattered in the human domain. During the war (W. W. II) and the Vietnamese War, it was unfortunate that patient numbers increased. The research on neurological aspects related to functions increased and specific remedial techniques were initiated for rehabilitation.

The present techniques used in brain research are stimulation and scan recording. Operations of repair for inappropriate relay links involve the use of stainless steel probes. Cells are frozen by a drop of nitrogen. Operations have been performed where the patient remains awake, directing the procedures by response. When awake the patient participates in the locating of the defective relay. Once located it can be deactivated (Cooper, 1978).

The auditory system which is vital to language development includes the ear, the auditory nerve the brain stem and the cerebral cortex. Animal studies have shown that the auditory cortex is not essential for perceiving a pure-tone, while discriminating frequencies, sound localization and pattern perception utilize the cortex (Schuell et al., 1964).

The visual system contains about 125 million rods and between four and seven million cones. These make up the optic nerve fibers. Patients undergoing electrical stimulation of the occipital area reported seeing lights, colour and movement in the form of wheels, spots or stars.

Penfield did considerable research in localization and supported the known research on mapping. Overall a great deal of shared sensory-motor functions were observed in different areas. This reinforces the concept of associative functioning which assists in compensatory growth in rehabilitation. He and his associates demonstrated the importance of the cortical speech areas. In spite of assigning functions to cortical areas the importance of subcortical structures which serve as integrating mechanisms should not be overlooked.

Broca identified the left hemisphere as containing the primary speech and language functions. This area consists of the first, second and third convolutions in the frontal lobe anterior to the Sylvian fissure. These findings were based upon observation of aphasic patients and upon

their death, scrutiny over the physiological abnormalities on the cerebral cortex in the form of softening. While the patients were alive, Broca observed that their comprehension and intelligence were not impaired. This was based upon their response to direction, which elicited the appropriate behaviours and gestures.

Wernicke extended the observations of Broca as he identified a more posterior injury, involving the temporal lobe. He postulated conduction aphasia resulting from interruption of fiber tracts connecting the auditory area and the motor speech area.

Head described aphasia of an amnesic variety which is generally attributed to the posterior-temporal or temporo-parietal region. Amnesic aphasia is also known to arise under conditions of no localizing significance, such as fatigue, intoxication or reduced level of consciousness.

Precise mapping appears to be difficult, if not impossible because of the integration of brain functioning.

Electrical stimulation applied to the lower two-thirds of the sensorimotor cortex of either hemisphere has produced arrest or slowing of speech. In the dominant hemisphere, these responses were also obtained from the posterior end of the third frontal gyrus, and from parietal and posterior temporal areas. No arrest of speech followed stimulation of Broca's area in the nondominant hemisphere . . . difficulty finding words was the predominant response to stimulation of the temporal and parietal areas (Schuell et al., 1964, p. 93)

The behaviour of patients having Broca's or Wernicke's aphasia has been differentiated by the analysis of their performance. Broca's aphasics are characterized by laborious articulation, great reduction in the flow of speech and a loss of grammatical structure. Wernicke's aphasics demonstrate naming difficulty, runs of rapid, fluently articulated speech, and sound and word substitutions. Perseveration is frequent. The observation of both intact and affected functions aid in the rehabilitation process. Porch developed a highly differentiated assessment tool (PICA) which not only charts functions but also describes the cognitive and perceptual precursors which need remediation in order to effect growth. The tool is also sensitive to any spontaneous recovery which might occur.

Physiologically then, the left hemisphere appears to be responsible for speech. There is a considerable amount of integrative functioning of various cortical areas. Intelligence appears to be somewhat distinct from the act of speech.

The child's exposure to language should not be called "teaching" . . . He learns language because he is shaped by nature to pay attention to it, to notice and remember and use significant aspects of it. (Miller, 1965)

In support of the predisposition concept, the human ear is most sensitive to frequencies which coincide with the human vocal capabilities. The muscular co-ordination needed for articulation is there in a more precise form than would be needed for food mastication. Miller (1965) refers to

Lenneberg who emphasized that the ability to acquire and use a human language does not depend on being intelligent or having a large brain. *It depends on being human.*

Developmentally the primary sensory areas establish the receiving centers for impulses first. Then light is seen, sound is heard and touch is felt. These centers initially only perceive. These primary areas have not yet developed discriminatory abilities. This reception of impulses gradually becomes more sensitive, instilling systematic patterns. Much dispute has occurred in the discussion of this pattern formation. Is the child "prewired" or is the environment responsible? It would appear that a child's perceptions lead him toward cognition and cognition to language.

The theoretical bases for language have worked hard for their individual causes without apparently seeing the merit of an overlay effect - innate, behavioral and environmental.

LANGUAGE DEVELOPMENT

Language itself involves an intricate set of patterns which blend together giving a final product - communication. The rule sets are; context or environmental rules, nonverbal messages, phonemic rules involving distinctive features phoneme sequence rules, morphemic rules carrying meaning and their alteration, semantic rules governing meaning relationships, and syntactic rules or grammar which contain

the rudiments of the constructions and their transformations.

Pragmatic rules involve the relations between the symbols and the user. These rules assist one in representing one's experiences and enable him to regulate his world. This experience brings about changes in one's conscious activity in social relationships.

The speaker and the listener in a dialogue situation utilize not only the context of the conversation to gain meaning, but also such features as facial and body gestures, as well as stress and intonation. In the dialogue situation, complete meaning transfer seldom occurs. The speaker's message is based on his internal and external mental sets. His ability to use words that portray the precise meaning intended, may be weak. His ability to fit body language with stress and intonation may be inappropriate. If these abilities are intact breakdown might be located in the perceptual set of the listener. The listener in his own right must comprehend meaning, associate these to his own internal and external mental sets in order to comprehend the message.

Tolstoy noted those who are accustomed to solitary independent thinking do not easily grasp another's thought and are very partial to their own; but people in close contact apprehend one another's complicated meanings by "laconic and clear" communication in the fewest words. (Vygotsky, 1962, p. 141)

Complete comprehension seldom occurs since the listener tends to try to fit the message into his context and adjust it to fit preconceived relationships. While this is being

done he is internally and externally motivated to prepare a response. An emotional variable also enters into the picture.

Barnes (1976) outlined six main factors that may constrain speech: the size of the group, the source of authority, group relationships, ordering of thought, speech planning and speech function. The "group" may, however, be only two. Therefore, a true and full understanding of another's thought is possible only when we understand its affective volitional bases.

A child's first communication is quite expressive even without the use of words. The contextual emotional variables which portray a large percentage of the message begin very early. Moerk (1977) outlines this sequence; 2 mo. ± delight, 3 mo. ± anger, 4 mo. ± disgust, and 5 mo. ± fear. Delight is subdivided at 8 mo. ± elation and 10 mo. ± affection. In the second year ± jealousy appears. A newborn appears at birth to be able to identify ± human and soon after ± familiar, ± female and ± self.

The emotional expressive patterns appear first. Along with these ± directive and ± referential become apparent. Directive is linked with emotion and subdivides into ± request and ± rejection. Directive and referential blend in ± possession. The infant's first movements although appearing to be somewhat random grow to grasping quite rapidly. Quite soon ± agent is linked with ± action then ± action to ± object and ± effect of action. These elements

are developing the basic patterns of cognition as words are droned within the environment.

The child creates first the class of objects generally, then classes of visually perceived objects, classes of sounds and sound patterns (phonemes) voices, intonation then sound patterns as words. (Moerk, 1977, p. 75)

Just as the child can express these elements, he can also understand them. Understanding comes from a look, a touch and the speech melody. Early studies have shown that very young infants are sensitive to any variations in these patterns and will react to them.

Moerk (1977) reported many studies on gestural communication which showed that they do indeed increase communication efficiency. Gestures are used to subdivide the flow of speech more clearly, and to add emphasis. An experience for the reader on the value of gestures would be the following - describe a spiral staircase without using gesture. The writer's experience in a foreign country with personal disjointed language facility reinforced for her the value of complementary gestures when communicating various messages. The present emphasis on this area of communication signifies a trend away from the predominant transformational grammarian approach as well as from a strictly behavioristic learning theoretical one.

Verbal elements are slowly integrated into this variety of complex communicative structures. With this, the vocal tract begins to express the needs and emotions so familiar to him. "The main work of the tuning of the vocal

organ to the harmonies of the mother tongue is completed early in infancy" (Moerk, 1977, p. 65).

The transition to language is quite smooth and natural. This transition, however, is also systematic in the semantic syntactic and phonetic sequences which appear. Duncan, Olwa and Stengel (1978) suggested this developmental sequence, Semantics → Syntax → Intonation → Phonology. They felt that expressive intonation develops early. This would support Moerk's description. They stated further that the child has an inventory of segmentals which fill in and add contour. This idea differs somewhat from the selection process hypothesized in phonology. They believed that intonation may not be a formulation process, rather it may consist of basic rhythmic patterning.

Meaning or receptive language seems to be the first to develop. More differentiated semantic relationships increase with experience as generalization and categorization become more specialized, eg. car - Pontiac, Ford, Plymouth, etc. Syntactic and phonetic development seem to appear in that order with considerable overlap. Everyone has heard children use grammatical sentences before they have acquired all the consonants. When asked why sheep couldn't pull Santa's sleigh, a four-year-old replied, "Dem tan't fly!" The intonation and stress was appropriate and quite expressive. Templin (1957) (Psych. 210, 1974) reported that children she studied used all structural forms of adult language by age three. Erwin-Tripp (1970) concluded that

most four-year-olds had learned not only the general structural features but also many of the subtle details as well.

The overall impression gained from the data so far is that children all over the world go through similar stages of development. Following babbling and one word utterances which denote meaning from intonation, context and stress, two word utterances appear. The two-word utterances are very important, for they not only constitute a stage of development but also seem to follow particular patterns in all the languages being studied.

The two-words are generally classified as either "open" or "pivot". The open words constitute a large class of words and pivot words are less in number but are used with greater frequency.

The content of the two-word utterances have also been classified according to the use or function. The first six classes have to do with objects,

- object identification - "that car"
- repetition or increase - "more milk"
- negation - "not shoe"
- nonexistence - "all gone cookie"
- possession - "my book"
- attribution - "pretty dress"

The last three include agents,

- agent-action - "Adam do"
- agent-object - "Mommy shoe"

- action-object - "see hand"
(Slobin, Psychology 73-74, 1973)

These classes can be linked to the basic preverbal cognitive patterns outlined by Moerk (1977).

This, therefore, would support a more cognitive base, rather than a behavioral base in the process of language development. Psychologists generally accept that a child can learn the meaning of particular words by imitation and reinforcement. Rules of grammar, however, are seldom, if ever, presented to him directly. Growth, therefore, although at times aided by S-R links, results from apparent innate potentials which respond to the contextual meanings being transmitted. Slobin (1970) (Psychology 73-74, 1973) postulated a "rules hypothesis" in which the child tests verbalizations until he speaks with adult grammar. The rules hypothesis then can shape growth. An S-R link which lacks meaning can be expressed, but pattern maintenance is very poor, with little transfer into spontaneous speech (Ramer, 1976; Courtwright & Courtwright, 1976). A cognitive base, in familiar environment, with verbal stimulation and interaction appears to be needed for language growth.

ENVIRONMENTAL VARIABLES

From conception until death learning is affected by external influence. The positive and/or negative effects are blended with cultural and psychological factors. Expectation and motivation appear more influential than do

economic variables.

A child's language development can be stunted whether he lives in a restricted ghetto, in a protected suburb, or in an isolated farm community. The child should no more be excluded from the rich range of personal language than he should have all evil and threatening representations removed from his literature. The child must be given his world - all of it.
(Smith, Goodman & Meredith, 1970, p. 8)

The literature tends to focus on negro "substandard English", comparison of deaf to rural "deprived", and delay due to sensory deprivation. The concentration tends to be on verbal expressive facility, in spite of Piaget's work. Various writers have expressed the need for the analysis of art in order to make observations in regards to cognitive development. Martin (1972) outlined five stages in assessing growth in Art.

- pictorials - material experimentation
- object portraits - colour and fit
- descriptive - experience
- placement - floating or grounded
- relational compositions - spatial awareness

Poor language test performance, upon which judgements are made, may be unreliable due to many variables. Labov (1972) felt that a test might be interpreted as being a request, a command, a threat or a meaningful sequence. He further states that, the social situation is the most powerful determinant of verbal behaviour and that an adult must enter into the right social relation with a child if he wants to find out what he can do. There was a significant increase

when testing negro children in verbal response, when the examiner was a Negro raised in Harlem. Redl (1959) outlined more subtle influences such as body posture, chair position, determination of power positions, impulse-control balance, time pressures, expectations of client and examiner, sensitivity to needs and accurate observation of behavioral ceilings. Sheltgren (1975) expressed these thoughts well,

Fortunate indeed is the youngster whose experiences are shared by an interested parent and who is motivated to discuss and interpret events in an atmosphere where he is free to be himself where curiosity is stimulated and his individual expression is respected. (p. 23)

Since verbosity is rewarded, one might assume that intelligence would be also evident. Labov (1972) argues against this, since he has observed that the elaborated code contains a great deal of disfunctional speech.

We know that people who use these stylistic devices are educated people, and we are inclined to credit them with saying something intelligent . . . in the end we do not know what he is trying to say, and neither does he. (p. 205)

Britton (1970) compared participant and spectator language and had some interesting observations. The participant's language was often clouded and less comprehensive. Since they feel a need to satisfy themselves through expression, they don't really listen. The spectator, on the other hand, was more detached and in that state could make more evaluation as well as select and order the material.

Baskervill (1977) and Labov (1972) felt that inadequate competences in standard literacy were behavioral

symptoms and that the nonstandard forms were legitimate and correct for specific populations.

Jacobson (1972) urged that future teachers must acquire appropriate attitudes. These would in turn provide motivational and methodological insights and would assist in solving the problems faced by urban education.

The importance of experience can not be overemphasized. Smith and Goodman et al. (1976) state that there can be no language without experience and no experience without language. Rosenzweig, Bennet and Diamond (1972) experimented with rats, providing many experiences for one group and none for the other. The stimulated rats had a thicker and heavier cortex than the controls, and also had more of the nerve chemical present. This chemical facilitates signal transmission within the brain. Schuell et al. (1964) observed in man that over time the thalamus and cortex have greatly increased in size. She also states that the associational, commissural and projective fibres have become more numerous. Leahey and Lewin (1978) observed that the superiority of man's brain has more to do with its organization than its size.

Harrel Allen (1977) observed that the amount of knowledge known to man increases at a tremendous rate.

At the rate at which knowledge is growing, by the time the child born today graduates from college, the amount of knowledge will be four times as great. By the time that same child is 50 years old, knowledge will be thirty-two times as great, and 97 per cent of everything known in the world will

have been learned since the time he was born. (p. 10)

Experience in the early years has a large determining effect upon development. The environment begins in the womb where nutritional effects will have a bearing upon fetal growth and stability. The anxiety levels before and after birth are imprinted in the merging self-concept. The social milieu can enhance or inhibit. The personality of the mother will be founded in her field of experience and will be reflected in her treatment of the child. Hess and Shipman (1965) found that assertive mothers fostered impulsivity in their children while passive mothers being more compliant, nurtured reflective children.

The family type will also influence child rearing practices. Status-oriented families tend to maintain authority with clearly defined roles which tend to produce "Because I said so". The person-oriented families described by Bernstein (1971) have blurred boundaries with more interaction and the roles evolve from the members themselves. These family and mother types are found in all social and economic levels. The literature appears to lean against the lower classes more often. McVicker-Hunt (1964) felt that questions in such homes seldom get answers and Hess and Shipman (1965) stated that their concept of school was, where one behaved as compared to the upper class which felt schools were for learning.

The motivational factors need to be mentioned since persons from these sub-cultures have made considerable

contributions to the field of knowledge. Salama and Hunt (1974) stated that children from lower classes know more hardship and stress and therefore, are more buoyant in later years. Present research on stress and resulting psychological breakdown take in a large sector of the upper middle class.

Bruner (1960) refers to motivational factors as he observes that people tend not to "tune in" to material which they feel is not significant to them. Selective attention depends upon the filtration networks which envelop us. These networks are founded in our cultural, environmental, emotional and cognitive sets. Miller (1963) concluded that people look for things they already know and believe rather than things they ought to learn. In the world filled with verbal stimulation who really listens? Eagle, Wolitsky and Klein (1966) suggested that we do process more than we are aware of in a sort of figure ground fashion. The figure being verbal and the ground non-verbal. The contents of the ground may register in the cognitive but not in the perceptual. This ground tends to emerge at a later time when the subject is not directly attending to external stimuli. Background material then can register, and prime material in the memory, given a suitable set.

Spelke (1976) reported experiments in which students could be trained to process more than one thing at a time. The tasks involved reading and spelling. The subjects read a story and spelled dictated words at the same time. Both increased in speed and proficiency. He concluded that

performance can improve in any task if we are willing to give time and effort to our attentional capacities. Peredo (1977) discusses mnemonic devices or tricks for increasing memory power. Before tricks are used she states that you must have a reason for wanting to remember. An analogy seems appropriate in her description,

Think of the brain as a library . . .
 when you want to find [a book] you have
 a better chance in a library [than] on
 one long shelf for science
 [lacking motivation we] tend to shelve
 things in a more general way. [We]
 don't make those deep and precise
 encodings that would enable [us] to
 remember. (p. 76)

Losing a word or the "tip of the tongue" phenomenon is a common experience. Peredo (1977) observes that the way you file information at the time of perception can determine what retrieval routes you have to use in order to get it out again.

Montessori (1969) believed in intrinsic motivation in her work with the deprived in Italy.

An interesting piece of work, freely
 chosen, which has the virtue of
 inducing concentration rather than
 fatigue: adds to the child's energies
 and mental capacities and leads him
 to self mastery. (p. 38)

COGNITION

The relationship between cognitive growth, environmental factors and language presents an intricate network. Since they are so related it is difficult to separate them developmentally, physiologically as well as in this paper.

Caramazza and Berndt (1978) reported naming disorders in aphasia. They feel that naming involved three processes, input in which features are analyzed, central where mapping features lead to classification, and output or articulation. Comprehension similarly involves three processes, input where acoustic features are perceived, mental lexicon in which semantic relationships are made and identification where transfer is made within the universe. Those with brain damage may experience disruption at any stage - in, central or out. Understanding and semantics would therefore refer to central processing or cognition. The literature which they reported sheds doubt on the concept mentioned earlier that general intelligence is located frontally. They reported that posterior deficits seem not to be anomic but rather to be conceptual in nature and anterior aphasics were able to recover some semantic space. The nature and depth of trauma is difficult to assess so one might assume that some association fibres have been involved. Leakey and Lewin (1978) support Caramazza and Berndt as they state,

. . . the frontal lobe is responsible

for controlling movements and for some aspects of emotions, the occipital lobe deals with sight, the temporal lobe is an important memory store and the parietal lobe has a vital role in comparing and integrating information . . . (p. 50)

Milestones in human development have been studied by anthropologists for some time. Man's curiosity, his self-awareness, his use of tools, his social growth, a system of reciprocal altruism, coping mechanisms and the use of language to question our place in nature, sets man apart.

These functions appear simultaneously, in sequence and in an overlapping fashion. Behavioral cognitive representation appears to be the most appropriate when observing growth.

Cognitive growth can be observed in play. Jeffree, McConkey and Hewson (1977) outlined its value. It can be serious or joyous and is the child's choice, initiated by him. He plays for its own sake rather than for a product. There is no risk of failure since he makes his own rules and it provides an outlet for frustration. In play he can practice old skills and build new ones and therefore it serves to broaden the mind. Play can be varied in type from rough to quiet, concentration in a group or alone. They defined the following guide:

- Exploratory play - here the child is getting order out of disorder, grasping and watching. At this stage the child receives first impressions, begins manipulation with his hands and crawls, thereby expanding his world.

- Energetic play - Gross motor growth increases. The child sits up, stands, walks, kicks balls, climbs, chases, jumps, throws and catches.
- Skillful play - The child begins to use both hands for clapping and holding large toys. One hand hammering, sorting, building and drawing soon follows.
- Social play - The child gradually learns to share, take turns and communicate with others in play. Friendships grow in teams as peers gradually increase in significance. Socialization can be encouraged by following their lead, cuddling, looking at books together and swapping toys, etc. The child usually becomes very attached to one particular friend before expanding to a larger group.
- Imaginative play - At this level the child becomes involved in symbolic play in which thoughts are the primary guiding force. Here creativity is reflected as they create their own amusements and gradually come to terms with themselves. Puppets, dolls, cut-outs, role-playing, small farm animals, trucks and sand tend to encourage such mental abilities. Preplanned activity sets such as mazes and puzzles encourage similar growth.

Piaget's work on play supports this guide provided by Jeffree, McConkey and Hewson (1977).

While in play verbalization occurs. Thought, however, passes through meaning and then through words. Silverman

(1972) observed no differences in the intricacy of utterances when in egocentric or social settings since early language is highly related to the child's perceptual-cognitive development. On this base then, both tend to reinforce each other - language and cognition. Language tends to facilitate cognition as abstract meanings are laid on the logical set. Slobin (1972) supports this since he states that the basic syntactic machinery seems to be mastered at the end of the two word stage. He states further that all basic grammatical operations are acquired by age four regardless of the native language or social setting. With the rudiments present, vocabulary, classification and experience broaden the cognitive realm and language becomes the person.

The true nature of cognition is presently being researched therefore observation of behaviours tends to be the only way in which measurement can be done. The use and misuse of intelligence tests have received considerable debate. The milieu in which tests are given, the culture and vocabulary variables and the chance of human interpretive error tends to weaken validity. Human error in the construction presentation, response and interpretation tend to cloud measures of intelligence. They provide general guides and are best considered as such.

Authorities in the field of mental testing define intelligence in several ways. Some look at it as a goal-oriented behaviour while others include experience and time as criteria in their definition. Thorndike's account of the

nature of intelligence names a variety of operations including attention, retention, recall, recognition, generalization and inductive and deductive reasoning.

Nelson (1978) reported the use of computers which seek to duplicate the characteristics of human intelligence.

Theoretically, a computer can be taught to imitate any human skill so long as it is given a sufficiently detailed and precise account of human performance. To date, researchers have attempted programs that model simple problem-solving skills, basic motor-visual functions and . . . natural language comprehension . . . the major obstacle confronting them has not been the obstinacy of the computer, but the absence of psychological, linguistic and neurological theories that adequately describe the simplest acts of human perception . . . researchers have been forced to investigate long-neglected areas of cognitive psychology and to evolve new theories of human reasoning. (p. 73)

Flavell (1970) described an analysis of cognitive-developmental sequences involving the following processes, addition, substitution, modification, inclusion and mediation. Very briefly each can be explained as follows;

Addition - one relationship is made, another develops and both operate equally. They both could serve as alternative cognitive means to roughly similar behavioral ends.

Substitution - the second response pattern takes over, extinguishing the first.

Modification - "superior performance derives from the preceding through a process of transformation" (p. 30). This appears to be precipitated due to

disequilibrium.

Inclusion - one response becomes interconnected or coordinated with more items thus constituting a larger cognitive whole.

Mediation - a response develops and it becomes capable of serving as a developmental bridge. Here the first set does not change but it is brought into play in subsequent re-enactments.

Concept development as it is related to language facility has been studied extensively in the deaf population. Furth (1961) concluded that the influence of language on concept formation is extrinsic and specific. He further states that language experience may increase the efficiency of concept formation in certain situations, but is not a necessary prerequisite for the development of the basic capacity to abstract and generalize. The accomplishments of Helen Keller bear witness to that hypothesis.

LANGUAGE BREAKDOWN AND EVALUATION

Children in school may appear language deficient for a variety of reasons - motivation, expectation, deprivation and/or retardation. Whether the deficit is cognitively, perceptually or environmentally based may be difficult to discern. Evaluation is therefore necessary.

Evaluation is sometimes confused with testing and measurement. The confusion is understandable because the three are related. Nevertheless, measurement is the process

of gathering quantified data, usually by using standardized tests, as well as certain kinds of attitudes and achievements. Evaluation should include measurement, but it is concerned with a broader range of a student's characteristics and attainments. Wallach (1978) criticized the misuse of standardized tests and tended to base her conclusions, in regard to child performance, upon observation, informal survey and utilization of scattered subtests. Testing refers to any procedures which require a student to perform for the purpose of assessment. The student cognisant of that fact may for any reason decide that his active participation is not necessary.

There are many definitions of evaluation, which all indicate that it is a broad and complex process composed of measurement, testing and observation.

Since testing procedures are a process of administration, scoring and interpretation by human evaluators, the process is not likely to be infallible. Gathering evidence of performance and comparing it with desired objectives and standards tend to be the foundation of evaluation.

Evaluation is done primarily to guide one in deciding what course of action is indicated. Teachers want to know if their students are achieving what was intended. If they are not, adjustment can be made.

Wilhelms (1967) wrote, "This is simply a fact of life; all our decisions are conditioned by perceptions of how we are doing in terms of what we hope to do." (p. 3).

Evaluation from the student's point of view means promotion or failure, course recommendation leading to occupation based upon strengths, assessing the accumulation of information and its integration into life, and stimulation of motivation. They may sense that a value judgement is being made upon them as people.

Evaluation should encompass the following,

- awareness of objectives valued by home and culture,
- objectives valued by the school - cognitive, affective and psychomotor,
- assistance in teaching and learning,
- facilitation of self-evaluation,
- provision of a broad profile of the learner's characteristics and achievement.

Kenworthy (1962) suggests fifteen means of evaluation:

1. observation by teacher of individuals, small groups and classes in many situations ranging from class discussions to library work
2. conferences or interviews with students
3. teacher-pupil planning
4. self-evaluation by students
5. evaluation by committees or panels
6. evaluation by the entire class
7. logs or diaries kept by individuals
8. teacher-made tests
9. standardized tests

10. observation of creative work by students
11. sociometric methods such as role playing
12. interaction with other teachers
13. interaction with parents
14. check lists
15. essays

These methods although geared to the older child have merit. Caution is advised if using #5 or #6 - the student's self-concept is in danger. The methods used naturally will be varied according to the child's individual differences.

There are many informal tests, behavioral surveys and language assessment tools. Some of those currently used are listed in Appendix A. These tend to overlap in their evaluation of perceptual, cognitive and language functions.

The language development literature now contains numerous examples of the variety of ways language data can be collected and analyzed. Researchers like Brown (1973) and Bloom (1970) make extensive use of spontaneous speech to analyze a child's linguistic understanding. Berks (1958) devised a method of exploring the child's morphological features. This is evident also in the ITPA (Illinois Test of Psycholinguistic Abilities). Slobin and Welsh (1973) analysed the child's underlying grammatical structure by presenting him with sentences that tax his immediate memory as he attempts to imitate them. The Token Test developed

by DeRenzi and Vignolo and described by Sarno (1972) evaluates facility in syntactic manipulation at the level of receptive language. Gray and Ryan (1973), and Lee (1974) both relied on error interpretation as they evaluated grammatical language functioning on the expressive level.

Labov (1972) criticized any method of elicitation that included questions and answers between child and adult. He preferred an unstructured child-child interaction. Duchan and Baskervill (1977) reported that the ITPA is biased in favour of Standard English speakers and therefore would not produce an accurate evaluation. The Denver Developmental Test used by public health nurses for screening school entrants, provides a profile of the child in personal-social, fine motor-adaptive, language and gross motor areas. The Reynell Developmental Language Scale (1969) evaluates a child's verbal comprehension as well as his expressive language as he manipulates small human and animal figures. Louise Binder Scott (1971) outlined a language behaviour evaluation which includes social behaviour, listening behaviour, speech and language behaviour and motor abilities which included hearing and vision. Siegel (1975) states that,

We are forced to call on our own experience, intuitions and good judgement in devising ways to describe and treat language disorders . . . we continue to learn and place new knowledge into the context of laboriously acquired insight and experience. We need both insight and knowledge to be effective. Mixed with our impatience to know more, there is reason to find a measure of confidence

as well. Most of us are equipped by intelligence and training to learn and to apply our knowledge. (p. 216)

LANGUAGE REMEDIATION

Rees (1972) outlined the bases from which different theoretical approaches have been developed - the developmental, the cognitive, the perceptual and the dialectal basis. He proposed that an awareness of these bases would assist the clinician in organizing his/her training program.

Clase (1973) reports three models for understanding communication disorders - those being; the medical model, the deviation model and the communication model. The first focuses on cause and accommodation. The second tends to make a value judgement, while the last measures listening and participant responses. This model is more concerned with speech as a tool for daily communicative needs.

Learning theory naturally enters into the remedial process. Language being considered a human behaviour has received attention from the behaviourist school.

Buckler (1967) described what is termed "The Pattern". This is built on an analysis of the structure of language. It provides the child at a very early age with an underlying language structure and enables him to understand language and to produce it with "greater ease, naturalness and correctness". Basic unit structures are patterned such as "On Monday we will" and then numerous sentence completions are practised with this first structure. She reported

considerable success with this method.

Fygetakis and Gray (1970) describe a method in which grammatically weak structures such as "the truck is big" or $N \rightarrow V \rightarrow \text{Adj}$ are conditioned through repetition of the sequence type for 35-45 minutes per day. These sequence types were complemented by pictures depicting the semantic relationships (eg. the car is brown, the tree is green, etc.). They reported success using this method.

Bereiter and Regan (1974) developed a similarly structured program in the form of "The Conceptual Skills Program". It tends to provide patterns which are repeated by groups in unison and builds language and cognitive relationships. This has also been proven to be effective.

Leonard (1975) states that language is learned as a finite set of rules, therefore the remedial program should emphasize response classes. He suggested modeling as a clinical procedure in language training. His article tends to mellow the more precise behavioral strategies already mentioned as he links form with function.

The traditional approach to language learning has been that of a therapeutic program, implemented in a non-distractive setting. Both program and setting were generally extremely structured. On completion of the allotted time period, the child would return to his own environment for the rest of his day. The mother may reinforce the therapist's input resulting in some success. Difficulties have been encountered, however, in maintenance and carryover with this approach.

In order to make remediation programs worthwhile, it is necessary to more adequately meet needs. It would then seem much more appropriate to provide stimulation within the living environment. Head Start attempted to do this. Although founded in support research, the cultural variables negatively influenced results. If the natural environment is the place, the superior-inferior dichotomy must be eliminated.

In the past, clinicians tended to reinforce the child for his correct language or speech. Parents reinforce for truth hence success at communicating. This success reinforces and motivates the child. School and clinical environments upon analysis of interaction tend to have the following types - instructional, spontaneous, and interactive communication. The percentages of instructional - "teacher talk" compared to interaction are heavily weighted on the former.

Moore and Lang (1977) found that the use of films was effective in language training since they provided context. They concluded that imitation and reinforcement could develop specific syntactic elements in the child's repertoire but added that both imitation and referent proved more effective. If one trains only through imitation, one ignores the importance of meaning in the semantic and contextual components. Holland (1975) supports this as she states:

language therapy should be centered in the present, teaching words with

empirical significance to the child,
 attempting to provide a language
 context which is generative to
 unassisted later language learning
 . . . teaching communication, not
 merely language skills. (p. 514)

Scott and Sattel (1972) discussed the important
 interactive relationship between perceptual and language
 learnings and suggested remediation be provided for both.

Amdur (1977) discussed language development in the
 context of cognition and emotion. Initially the child as a
 system must be analyzed as being open or closed. The open
 show curiosity while the closed withdraw. Cognition and
 emotion may affect the open self. A healthy open system is
 pliable in that it can change its defenses according to the
 situation. Behaviorism is quite often utilized in approaching
 a closed system. She related present studies in temperament
 and culture, temperament, self and cognition, and patterns
 of coping. Five basic temperament types emerged.

- adaptability, in which values in home and school are
 congruent
- slow to warm up, this type avoids language and new
 situations
- distractibility - these tend to like interruptions and
 use them to avoid the task
- high activity - in which the frustration is low and
 persistence is high
- high emotion - this type is low persistence and low
 attention.

There was no positively correlated environment for any of the types. What did vary, however, was the communication with the significant adults in each case. In order to effect language growth the concept of self requires equilibrium. Thought which builds cognition involves the integration of sensory input, cognitive sets present, and emotional stability and it is then demonstrated in communication within the environment.

Boykin (1977) referred to the overemphasis of nouns in recent language training programs. She outlined the following plan for therapy in language:

- Teach words that are useful.
- Teach the word with meaning, demonstrating the function whenever possible.
- Don't teach opposites at the same time.
- Talk about what they are going to do, are doing and have done.
- Evaluate the clinician's language level - is it appropriate?
- Evaluate mother-child interaction.
- Evaluate mother's language patterns.

She referred to research done by Snow (1976) in which he observed that mothers naturally precede the expressive language of the child by one step.

She continued by outlining seven stages in language therapy,

1. Existence - this, that, there - These words refer to objects in relation to the child.

2. Non-existence - no, all gone, away.
3. Recurrence - more, again, another.
4. Attribution - size, colour, shape, taste.
5. Possession - mine.
6. Action - give, do, make, get, wash, etc.
7. Locative action - fall, sit, throw, go, put up and down.

(Holland, 1975)

The first teachers - mothers, seem to have the best remedial methods based instinctively.

. . . they help the child match the linguistic code with his perceptual and conceptual structures. Although mothers make language learning an overwhelmingly pleasant experience, they have nevertheless found ways to provide corrective feedback and have developed techniques to emphasize the more difficult elements of constructions so the child can perceive them clearly and can analyze and store them.
(Moerk, 1977, p. 255)

Since the remedial focus is tending to shift toward understanding as it relates to expression, the curriculum might involve stimulation of basic thinking skills. This necessitates then appropriate activity selection, listening and thinking, modeling and checking and probing for understanding. Receptive areas are made secure before expression is expected.

Observation, causal reasoning, prediction, classification, seeing relationships and sequencing all build the cognitive sets. Jeffree and McConkey (1976) outlined many activities in their book "Let Me Speak".

When basic concepts are reinforced and expression increases Smith et al. (1970) suggest the following strategies to promote both cognition and verbalization.

1. Creative Play
2. Guiding Play Talk
3. Creative Dramatics
4. Classroom Conversation
5. Classroom Dialogue, Exposition, Discourse and Argument
6. Novel Objects
7. Enlightened Opportunism
8. Question Cards
9. Picture Sets
10. Charades
11. Password
12. Immediate experience recalled
13. Memories of earlier experience recalled
14. Finding humour
15. Fantasy
16. Read to them
17. Tape recorded production of stories
18. Predicting spelling
19. Learning to spell through reading
20. Spelling Instruction
21. Handwriting
22. Literacy
23. Punctuation
24. Final Copy
25. Put child in relation with materials
26. Read with and to him

IMPLICATIONS ON THE READING PROCESS

Smith Goodman and Meredith (1970) state that reading, writing, listening and speaking are all positively related. Children who are low in general oral language tend to be low in reading and writing achievement. Children high in language ability tend to do well in gaining literacy skills.

Reading readiness appraisal is heavily weighted toward visual discrimination tasks rather than the combination of visual and auditory tasks. The emphasis may need to be

shifted since auditory parameters are closely related to language learning and language learning to reading. Kirby, Lyle and Amble (1972) observed in their studies that the auditory subtests of the ITPA were significantly related to reading ability, while visual subtests were not.

Gruenewald and Pollack (1973) suggest this framework in assessing reading readiness skills;

- A - Following directions - attending - visual and auditory
 - language used - comprehension
 - task performance - motor, perceptual, conceptual or verbal
- B - Language - nonverbal
 - social
 - comprehension - nonverbal-verbal
 - verbal - structure and content
 - concept parameters - classification and relationships
- C - Auditory behaviour - listening behaviour
 - recognition, identification and localization of sound
 - discrimination
 - CONCEPT-same-different
 - NONVERBAL-sound, pitch, rhythm
 - VERBAL-letter sounds, words
- D - Visual behaviour - visual reception
 - visual recognition and identification
 - visual discrimination
 - visual memory and sequencing
 - visual association
 - visual closure
- E - Motor behaviour - gross motor performance
 - fine - visual - motor
 - hand-eye, eye focus
 - tracking and midline structure

Muma (1977) suggested a language intervention strategy which dealt with intermodality transfer. This involves transferring information about language from one modality, usually speech or listening, to another modality,

usually reading or writing.

While intermodality transfer is useful with students who use nonstandard dialects, it is also very useful for children with learning disabilities and poor reading skills time was spent just talking about school, friends, activities - anything that interested her. After she was spontaneous and reasonably adept in elaborating and altering her stories, she was asked to dictate them to her clinician After the story was read . . . (harder) extracted words were reread with surprising skill . . . a week after, she reread her stories with relatively few errors (p.116)

Baratz (1969) observed that children who speak non-standard English also read in the same nonstandard manner. They comprehend the standard forms and then apply their cultural syntactic and phonological rules as an overlay.

Since reading is a language process, the fundamentals discussed with regard to variables affecting language development apply also to reading. These variables include - material that is meaningful to the child, building on the linguistic strengths, and motivational factors. Reading should also involve a search for meaning. The human mind tends to use the following strategies outlined by Goodman (1965) - sampling strategies, prediction strategies, confirming strategies and comprehending strategies. The parallel with language processing is obvious. Current research methodology promotes the use of a limited number of function words, which manipulate a large more open class which depends upon context.

Goodman (1965) renames errors as miscues, or errors in prediction. The use of predictability naturally requires good comprehension. A child who reads in a rather laborious manner but substitutes "lake" for "river" has good comprehension of the content. Giolas, Cooker and Duffy (1970) studied word predictability. In their study subjects listened to three sentence lists. They found that they could remove up to 25 of the 50 key words before prediction was reduced. As students begin to read with this system, their independence increased since the process was kept whole.

Predictability occurs in oral language as well. Two people in dialogue might say - "About that promotion you asked for . . ." the listener hears the words, senses the intonation and stress and replies, "I understand." Vygotsky outlined something similar in his description of "one word communicative messages" (1964, p.143). As examples of this, complete the following:

1. Once upon _____.
2. 'Tis the season _____.
3. The dog chewed _____.
4. Un homme and his frere walked toward la porte.
5. Ja, ich spreche ein wenig Deutsch.

Anticipation is a strategy which also facilitates second language learning. Gifted individuals and those skilled in speed-reading can utilize prediction when skimming material.

Goodman discouraged the use of configuration clues since that tends to emphasize the visual rather than semantic aspects. People tend to need and feed on information. We scan for pertinent information, feeling, making and amending our conclusions.

The remedial environment has varied approaches. From the framework of assessing reading readiness skills, weakness may be observed in the visual area. In keeping with the major policy of treating the deficit area while reinforcing intact areas, children with visuo-spatial defects who are below the age of eight years might be given a program involving visuo-spatial training. The Frostig program has been under fire of late, with no alternative methods being proposed by those attacking it. The program may be used preventatively or remedially and helps the child integrate eye-motor functioning, figure-ground recognition, form constancy spatial relationships, and position in space. The program itself doesn't provide all the answers but can serve as a reference for the creative teacher.

N. C. Kephart also discussed by Barnatyne (1968) has a training program which enables a child to integrate motor functions globally. Gross motor training becomes more refined until eye-hand co-ordination and finger control are trained. Spelling and writing receive emphasis. Several workers in the field advocate the use of cursive script rather than conventional printing. They feel that it increases the diversity of letter shapes thus broadening the

visual experience, joined letters represent a "gestalt" of phonemes, and it requires less effort for the child with faulty co-ordination.

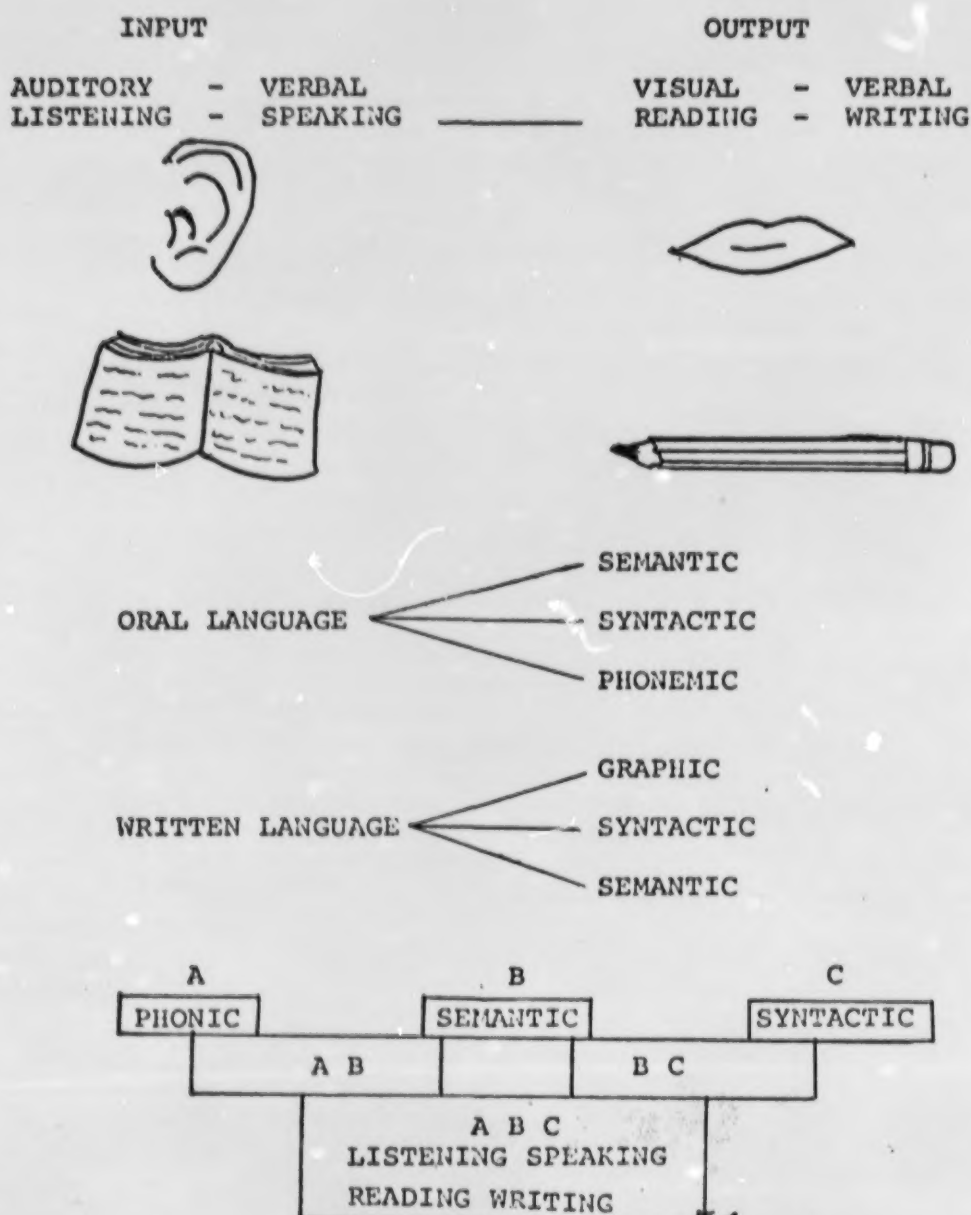
Auditory weaknesses which affect language learning will also affect the reading process. Children may suffer from frequency deafness, waxing and waning of volumes of sound, scrambling of sounds or lack of auditory discrimination. For any of these reasons, they will find it difficult to sequence phonemes and to match them with visual symbols. Such children may improve using a phonic approach to reading. This method is more difficult since sound-symbol relationships are isolated from meaning, our language is not 100% phonemic, and children must have high visual and auditory retention. The method used remedially, however, does assist the phoneme-grapheme linkage. Meaning and a love of literature may be encouraged through reading to the children as they attempt to bridge the phoneme-grapheme gap.

Slingerland (1972) advocates that classrooms for children with specific language disabilities be within the scope of general education rather than special education. At present such classes are in operation and they utilize a great deal of integration in either direction.

Simon (1975) suggests that teachers would benefit from workshops on the concept of language expansion. She feels that too much "teacher talk" does not expand communication skill, rather it inhibits it.

Dechant (1968) states that, most disability cases are made rather than born that way. Reading disabilities are sometimes the result of predisposing conditions within the child that are unrecognized, but for the most part they are brought about by factors in the child's environment at home, at play and in school.

Wallach (1978) described the complex-symbol system of language using this chart.



She suggested that words are best taught in relation to others. This facilitates chunking and therefore retention. The task in remediating reading disabilities is to access the grapheme to speech. Segmentation tends to break these links so blending, sound, syllable, word, syntax and semantics provides a more naturalistic approach.

Remediation of language and its offspring, reading requires a willingness to grow on the part of the student and the teacher. Language acquisition never ends; it is a life long experience.

As language develops, it becomes a tool of the child's striving to derive meaning from his world. In turn language is expanded by this striving.

(Smith, Goodman & Meredity,
1970, p. 12)

REFERENCES

- Amdur, J. Language development in the context of cognitive and emotional development. Presentation at the Ontario Speech and Hearing Convention, Toronto, 1977.
- Bannatyne, A. Diagnostic and remedial techniques for use with dyslexic children. Academic Therapy Quarterly, III, 1968, 213-224.
- Baratz, J. C. Linguistic and cultural factors in teaching reading to ghetto children. Elem. Eng., 46, 1969, 199-203.
- Barnes, D. From communication to curriculum. England: Penguin Books, 1976.
- Baskerville, R. D. The speech-language pathologist - a resource consultant for enhancing standard English competencies among inner-city children. Language, Speech & Hearing Services in Schools, VIII(4), 1977, 245-249.
- Beckwith, L. & Thompson, S. K. Recognition of verbal labels of pictured objects and events by 17-30 mo. old infants. Journal of Speech & Hearing Research, 19(4), 1976, 690-699.
- Bereiter, C. Games to teach thinking. OISE Publication.
- Bereiter, C. A. & Regan, E. M. The conceptual skills program. Toronto: Applied Psychology and Curriculum, OISE, 1974.
- Bernstein, B. Social class, language and socialization. (1971) from Language in Education. London: Routledge & Kegan Paul Ltd., 1972, 102-110.
- Binder Scott, L. Language behavior evaluation. New York: McGraw-Hill Inc., 1971.
- Bloom, L. Language development. Cambridge, Mass.: MIT Press, 1970.
- Bloom, L. Language development: form and function in emerging grammars. Cambridge, Mass.: MIT Press, 1970.

- Boykin, L. A review of language therapy programs in Ontario. Presentation at Ontario Speech and Hearing Convention, Toronto, 1977.
- Braun, C. & Klassen, B. A transformational analysis of oral syntactic structures of children representing varying ethnolinguistic communities. Child. Dev., 42(6), 1971, 1859-1871. DSH Abstracts, 13(1), Deafness, Speech & Hearing Pub. Inc., Washington, 1973.
- Britton, J. Language and learning. Florida: University of Miami Press, 1970.
- Brown, R. A first language: the early stages. Cambridge, Mass.: Harvard University Press, 1973.
- Bruder, G. & Silverman, W. Effects of semantic and phonetic similarity on verbal recognition and discrimination. J. Exp. Psychol., 94(3), 1972, 314-320. D.S.H. Abstracts, Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Bruner, J. S. Learning in the classroom. Rhode Island College Journal, 1(2), 1960, 35-42.
- Buckler Sr., M. S. Expanding language through patterning. Washington: Alexander Graham Bell Assoc. for the Deaf, Inc., 1968.
- Caramazza, A. & Berndt, R. S. Naming disorders in aphasia: retrieval failure or breakdown of conceptual structure? Babble Conference: Niagara Falls, 1978.
- Cooper. The body human: the vital connection. TV Program 60 Minutes, Channel 6, Feb. 1978.
- Clase, J. M. Models for understanding communication disorders. Language, Speech and Hearing Services in Schools, IV(4), 1973, 200-202.
- Courtright, J. A. & Courtright, I. C. Imitative modeling as a theoretical base for instructing language-disordered children. Journal of Speech and Hearing Research, 19(4), 1976, 655-663.
- Dechant, E. Diagnosis and remediation of reading disability. New York: Parker Pub. Co., 1968.
- Dewey, J. How we think. New York: D. C. Heath, 1933.
- Duchan, J. & Baskervill, R. D. Responses of black and white children to the grammatical closure subtest of the ITPA. Language, Speech & Hearing Services in Schools, VIII(2), 1977, 126-132.

- Duncan, J., Oliva, J. & Stengel, M. A dynamic phonological model to explain psycholinguistic processing of jargon in an adult aphasic. Babble Conference: Niagara Falls, 1978.
- Eagle, Wolitsky & Klein. The perceptual field. Science, 1966, 151(3712), 837-839.
- Erwin-Tripp, S., Structure and process in language acquisition. Washington: Georgetown University Press, 1970.
- England, J. L. Improved speech, hearing and language services. Language, Speech and Hearing Services in Schools, IV(4), 1973, 207-210.
- Flavell, J. H. An analysis of cognitive-developmental sequences. Minnesota: Institute of Child Development, 1970.
- Freedman, P. P. & Carpenter, R. L. Semantic relations used by normal and language-impaired children at stage 1. Journal of Speech and Hearing Research, 19(4), 1976, 784-795.
- Friedlander, B. Z., Jacobs, A. C., Davis, B. B. & Wetsone, H. S. Time-sampling analysis of infants' natural language environments in the home. Child. Dev., 43(3), 1972, 730-740, DSH Abstracts, 13(1), Deafness, Speech & Hearing Pub. Inc., Washington, 1973.
- Furth, H. G. The influence of language on the development of concept formation in deaf children. Journal of Abnormal and Social Psychology, 1961, 63, 386-389.
- Fygetakis, L. & Gray, B. B. Programmed conditioning of linguistic competence. Behav. Res. & Therapy, 1970, 8, 153-163.
- Gibson, E. J. The ontogeny of reading. American Psychologist, 25, 1970, 136-143.
- Giolas, T. G., Cooker, H. S. & Duffy, J. R. The predictability of words in sentences. J. Aud. Res., 10(4), 1970, 328-334. DSH Abstracts, 13(1), Deafness Speech and Hearing Publications Inc., Washington, 1973.
- Goodman, K. S. A linguistic study of cues and miscues in reading. Elementary English, 42, 1965, 639-643.
- Gray, B. B. & Ryan, B. P. A language program for the non-language child. Champaign, Ill.: Research Press, 1973.

- Gruenewald, L. J. & Pollak, S. A. The speech clinician's role in auditory learning and reading readiness. Language, Speech and Hearing Services in Schools, IV(3), 1973, 120-126.
- Harrell-Allen, T. H. Are you suffering from information overload? Life and Health, 1977, 9-11.
- Hess, R. D. & Shipman, V. C. Early experience and the socialization of cognitive modes in children. 1965. From Language in Education. London: Routledge & Kegan Paul Ltd., 1972, 169-177.
- Holland, A. L. Language therapy for children: Some thoughts on context and content. Journal of Speech and Hearing Disorders, 40(4), 1975, 514-523.
- Jacobson, R. An inquiry into the relevancy of current English instruction. Lang. Learn., 22(1), 1972, 79-98, DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Jeffrey, D. & McConkey, R. Let me speak. London: Souvenir Press, 1976.
- Kenworthy, L. S. Guide to social studies teaching. California: Wadsworth-Belmont, 1962.
- Kirby, E. A., Lyle, W. & Amble, E. R. Reading and psycholinguistic processes of innate problem readers. J. Learn. Disabilities, 5(5), 1972, 295-298, DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Labov, W. Finding out about children's language. Language, Speech & Hearing Services in Schools, VIII(1), 1977, 63-68.
- Labov, W. The logic of nonstandard English in Language in Education: A source book. London: Routledge & Kegan Paul Ltd., 1972.
- Leakey, R. E. & Lewin, R. Origins of the mind. Psychology Today, 12(2), 1978, 49-62.
- Lee, L. Developmental sentence analysis. Chicago: Northwestern University Press, 1974.
- Leonard, L. B. Modeling as a clinical procedure in language training. Language, Speech and Hearing Services in Schools, VI(2), 1975, 72-85.

- Longhurst, T. M. & File, J. J. A comparison of developmental scores from head start children collected in four conditions. Language, Speech & Hearing Services in Schools, VIII(1), 1977, 54-63.
- Martin, J. H. Assessing growth in the pictures and stories of kindergarten children. Handout, Dept. of Education Course, 1972.
- McVicker, Hunt, J. How children develop intellectually, Children, 11(3), 1964, 83-91.
- Miller, G. A. Language and communication. Mass.: McGraw-Hill, 1963.
- Miller, G. A. Some preliminaries to psycholinguistics, American Psychologist, 20, 1965, 15-20.
- Miller, Kagan, Skinner, Chomsky. Audio colloquies. New York: Harper & Row.
- Moerk, E. L. Pragmatic and semantic aspects of early language development. Baltimore: University Park Press, 1977.
- Montessori, M. The absorbent mind. Indiana: Kalakshetra Pub., 1969.
- Moore, W. H. & Lang, M. K. Semantic and contextual components of language: a method of control and manipulation by the clinician. Language, Speech and Hearing Services in Schools, VIII(3), 1977, 164-168.
- Muma, J. R. Language intervention strategies. Language, Speech and Hearing Services in Schools, VIII(2), 1977, 107-125.
- Nelson, R. The first literate computers. Psychology To-day, 11(10), 1978, 72-80.
- Nolen, P. S. Reading nonstandard dialect materials: a study at grades two and four. Child Development, 43(3), 1972, 1092-1097, DSH Abstracts, 13(1), Deafness, Speech & Hearing Pub. Inc., Washington, 1973.
- Novak, J. Teacher behavior, Brock University. Active listening. Effectiveness Training Inc., 1977.
- Peredo, S. Memories are made of this Quest, 6(6), 1977, 74-76.
- Poon, W. & Butler, K. G. Evaluation of intraverbal responses in five to seven year old children. Journal of Speech and Hearing Research, 15(2), 1972, 303-307.

- Ramer, A. L. H. The function of imitation in child language. Journal of Speech and Hearing Research, 19(4), 1976, 700-717.
- Redl, F. The concept of a therapeutic milieu. American Journal of Orthopsychiatry, XXIX, 1959, 721-734.
- Rees, N. S. Bases of decision in language training. Journal of Speech and Hearing Disorders, 37(3), 1972, 283-304.
- Reynell developmental language scale. England: N.R.E.R. Pub. Co. Ltd., 1969.
- Rogers, C. R. The interpersonal relationship in the facilitation of learning. The Human Encounter: Readings in Education, Washington, 1967, 418-432.
- Rosenzweig, M. R.; Bennett, E. L. & Diamond, M. C. Experience and brain development. Life and Health, 1972, 15-18.
- Rubeinstein, J. & Assoc. Psychology 73-74. Connecticut: Dushkin Pub. Group Inc., 1973.
- Sarno, M. T. Aphasia: selected readings. New York: Appleton-Century-Crofts, 1972.
- Schlesinger, R. Learning grammar - from pivot to realization rule. New York: Academic Press, 1971.
- Schuell, H., Kenkins, J. J. & Jiménez-Pabón, E. Aphasia in adults. New York: Harper & Row, 1964.
- Scott, R. & Sattel, L. Perception and language: a German replication of the Piaget-Inhelder position. J. Genet. Psychol., 120(2), 1972, 203-210, DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Shelgren, M. When your child talks. Life and Health, 1975, 22-23.
- Siegel, G. M. The use of language tests. Language, Speech and Hearing Services in Schools, VI(4), 1975, 211-217.
- Silverman, E. M. Syntactic complexity of preschoolers' egocentric and socialized speech. Percept. Motor Skills, 35(1), 1972, 247-248.
- Simon, C. S. Talk time: language development in readiness classes. Language, Speech and Hearing Services in Schools, VI(3), 1975, 161-168.

- Slingerland, B. H. Preventive teaching programs in the classroom: a general education responsibility. Bull. Orton. Soc., 22, 1972, 156-163. DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Slobin, D. I. Children and language. Psychology To-day, 6(2), 1972, 71-74.
- Slobin, D. I. & Welsh, C. A. Elicited imitation as a research tool in developmental psycholinguistics. In C. A. Ferguson & D. I. Slobin, Studies of Language Development. New York: Holt, Rinehart & Winston, 1973.
- Smith, E. B.; Goodman, K. S. & Meredith, R. Language and thinking in school. New York: Holt, Rinehart & Winston, 1970.
- Salama & Hunt. Article from Psychology 210, 1974.
- Snyder, B. R. The hidden curriculum. Cambridge, Mass.: M.I.T. Press, 1971.
- Spelke, R. Skill of divided attention. Cognition, 1976.
- Traywick, H. A rural county speech and language program. Language, Speech and Hearing Services in Schools, VIII(4), 1977, 250-255.
- Templin. 1957 _____ Handout, Psychology 210, 1974.
- Vernon, M. Relationship of thought, language and nonverbal communication to reading. Claremont Reading Conf. Yearbook, 32, 1972, 137-149. DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Vygotsky, L. S. Thought and language. Cambridge, Mass.: M.I.T. Press, 1962.
- Wallach, G. A language approach to learning disabilities. Presentation at Brock University, St. Catharines, 1978.
- Whitehurst, G. J.; Novak, G. & Zorn, G. A. Delayed speech studied in the home. Dev. Psych., 7(2), 1972, 169-177. DSH Abstracts, 13(1), Deafness, Speech and Hearing Pub. Inc., Washington, 1973.
- Wilhelmo, F. T. Evaluation as feedback and guide. 1967 Yearbook ASCD, Washington, 1967.

SELECTED DEVELOPMENTAL LANGUAGE SCALES.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Anderson, R., Miles, M., and Matheny, P.	Communication Evaluation Chart. Cambridge, Mass.: Educators Publishing Service (1963).	Both language and performance items selected from various pre-school intelligence tests and developmental scales. Suitable for children between 3 months and 5 years old.
Berry, M.	Language Disorders of Children. New York: Appleton-Century-Crofts, Inc. (1969), Chapter 6.	Tables of developmental non- verbal adaptive behavior, as well as tables of development of comprehension and use of oral language. Also, long- itudinal inventories for a variety of behaviors. Suitable for children between 1 week and 8 years old.
Boone, D.	Infant speech and language development, Volta Rev., 67, 414-419 (1965).	Items in the area of decoding and encoding for children from 1 to 24 months old.
D'Asaro, M., and John, V.	Rating scale for evalua- tion of expressive, recep- tive, and phonetic lan- guage development in the young child. Cere- bral Palsy Rev., 22, 3-4 (1961)	As title implies, evaluates behav- ior in three areas, for ages ranging from 4 weeks to 72 months. Permits a receptive, expressive, and phonetic speech age to be derived.
Doll, E.	Vineland Social Matu- rity Scale. Minneapolis: American Guidance Service, Inc., (1936)	Measures social competence from birth to 25 years. Communica- tion items are included.
Doll, E.	Preschool Attainment Record, Experimental Edition. Circle Pines, Minn: American Guidance Service, Inc., (1966).	Eight subscales determining pre-school behavior from birth to 7 years. One subtest deals with communication.
Gesell, A., and Amatruda, C.S.	Developmental Diagnosis (2nd ed.) New York: Paul B. Hoeber (1947)	Presents items for assessing the stages and sequences of language behavior from 4 months to 3 years.
Haeussermann, E.	Developmental Potential of Preschool Children. New York: Grune & Sutton, Inc. (1958)	Language items for the child from 2 to 4½ years. Test spe- cifically designed for assess- ment of cerebral-palsied children.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Johnson, W., Darley, F., and Spriestersbach, D.	Diagnostic Methods in Speech Pathology. New York: Harper & Row (1963), Chapter 7.	Describes techniques for determining mean length of response as well as other developmental language measures.
Lenneberg, E.	Biological Foundations of Language. New York: John Wiley & Sons, Inc. (1967), pp. 128-130.	A table of developmental milestones in motor and language development from 12 weeks to 4 years.
Zimmerman, I., Steiner, V., and Evatt, R.	Preschool Language Manual. Columbus, Ohio: Charles E. Merrill Publishing Co. (1969)	A scale assessing auditory comprehension, verbal ability, and articulation from 1½ to 7 years. An overall language quotient may be obtained, and quotients for both auditory comprehension and verbal ability can be calculated.

SELECTED COMPREHENSIVE TESTS OF LANGUAGE.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Crabtree, M.	The Houston Test for Language Development. Houston: Houston Test Company (1963).	Receptive and expressive test items for ages ranging from 18 months to 6 years and covering a broad range of speech and language skills.
Kirk, S., McCarthy, J., and Kirk, W.	The Illinois Test of Psycholinguistic Abilities. (Rev. ed.) Urbana: University of Illinois Press (1968).	A widely used test, containing ten subtests (two supplementary ones) for ages 2 to 10. Standardized on approximately 1000 children.
Lerea, L.	The Michigan Picture Language Inventory. Ann Arbor: University of Michigan (1958b).	Assesses receptive and expressive vocabulary and nine aspects of language structure for ages ranging from 4 to 6 years.
Mecham, M., Jex, J., and Jones, J.	The Utah Test of Language Development. (Rev. ed.) Salt Lake City, Utah: Communication Research Associates (1967).	Arranges items compiled from other tests by age, from 1 to 15 years, for measuring several aspects of language.
Mecham, M.	The Verbal Language Development Scale. Minneapolis: American Guidance Service, Inc. (1959).	Extends the communication items from the Vineland Social Maturity Scale in an informant interview scale; for ages ranging from 0 to 15 years.

SELECTED TESTS FOR ASSESSMENT OF RECEPTIVE LANGUAGE BEHAVIOR:
SEMANTIC, SYNTACTIC, AND PHONOLOGICAL.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
I. SEMANTIC LEVEL		
Ammons, R., and Ammons, H.	Full-Range Picture Vocabulary Test. Missoula, Mont.: Psychological Test Specialists (1958).	Provides norms for recognition vocabulary, ranging from the 2 year-old to the superior adult level.
Dunn, L.	Peabody Picture Vocabulary Test. Minneapolis: American Guidance Service, Inc. (1965).	Provides age equivalents for recognition vocabulary, ranging from 18 months to 18 years.
Kirk, S., McCarthy, J., and Kirk, W.	Auditory Reception Subtest, The Illinois Test of Psycholinguistic Abilities. (Rev. ed.) Urbana: University of Illinois Press (1968).	Assesses comprehension of word meanings in short sentences with yes-no responses.
Lerea, L.	The Michigan Picture Language Inventory, Comprehension Vocabulary Subtest. Ann Arbor: University of Michigan Press (1958b).	Tests comprehension vocabulary in 35 items, for ages from 4 to 6 years.
II. SYNTACTIC LEVEL		
Berry-Luterman, L., and Bar, A.	The diagnostic significance of sentence repetition for language-impaired children. J. Speech Hearing Dis., 36, 29-39 (1971).	Presents sentences for a test of syntactic competence and suggests possible interpretations of findings in language-impaired children.
Carrow, M.	The development of auditory comprehension of language structure in children. J. Speech Hearing Dis., 33, 99-111 (1968).	Experimental edition of a test with norms for children from 3 to 7½ years; assesses elements of language structure by means of pointing to pictures.
Foster, C., Giddan, J., and Stark, J.	ACLC: Assessment of Children's Language Comprehension. Palo Alto, Calif: Consulting Psychologists Press (1969).	Assesses the child's ability to comprehend up to four critical elements in correct order in phrases and sentences.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Lee, L.	The Northwestern Syntax Screening Test. Evanston, Ill.: Northwestern University Press (1969)	Receptive section of the test evaluates comprehension of morphologic and syntactic structures by children from 3 to 8 years.
Lerea, L.	The Michigan Picture Language Inventory. Ann Arbor: University of Michigan Press (1958b)	Assesses the comprehension of nine grammatical classes of words.
Menyuk, P.	Sentences Children Use. Cambridge, Mass.: The M.I.T. Press (1969)	Uses sentence repetition for a test of syntactic competence.
III. PHONOLOGICAL LEVEL		
Flowers, A., and Costello, M.	Flowers-Costello Test of Central Auditory Abilities. Dearborn, Mich.: Perceptual Learning Systems (1970)	Tests response to low-pass filtered speech and response to competing messages.
Goldman, R., Fristoe, M. and Woodcock, R.	Goldman-Fristoe-Woodcock Test of Auditory Discrimination. Circle Pines, Minn.: American Guidance Service, Inc. (1970)	Pre-recorded test of auditory discrimination, controlling for vocabulary, designed for persons 3 years, 8 months to adulthood. Also assesses discrimination in noise.
Haskins, H.	Phonetically balanced kindergarten word lists. In H. Newby (Ed.), Audiology (2nd ed.) pp. 375-379. New York: Appleton-Century-Crofts, Inc. (1964)	Provides a measure of auditory discrimination of phonemes under standardized conditions.
Katz, J.	Kindergarten Auditory Screening Test, Parts I and II. Chicago: Follett Educational Corporation (1971)	Assesses listening for speech in background noise and word-pair sound discrimination.
Lindamood, C., and Lindamood, P.	Lindamood Auditory Conceptualization Test. Boston: Teaching Resources Corporation (1969)	Tests ability to recognize differences in speech sounds as well as number and order of sound sequences in sound patterns.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Mecham, M., and Jex, J.	Picture Speech Discrimination Test. Provo, Utah: Brigham Young University Press (1962).	Has clear pictures which have been selected from the Thorndike list so that they are within age range of child.
Pronovost, W., and Dumbleton, C.	A picture-type speech sound discrimination test. J. Speech Hearing Dis., 19, 258-266 (1953)	Known as the Boston University Speech Sound Discrimination Test, this test requires a same-different response to phonetically similar monosyllabic words.
Rosner, J., and Simon, D.	The Auditory Analysis Test. Pittsburgh: Learning Research and Development Center, University of Pittsburgh (1970)	Requires children from kindergarten through sixth grade to repeat a spoken word omitting specific phonemic elements.
Templin, M.	Certain Language Skills in Children. Minneapolis: University of Minnesota Press (1957).	Presents 50 auditory discrimination items standardized for children aged 3 to 5 years.
Wepman, J.	Auditory Discrimination Test. Chicago: Language Research Associates (1958).	Requires that the child give a same-different response to 40 pairs of words; has norms for ages 5 to 8 years.

SELECTED TESTS FOR ASSESSMENT OF EXPRESSIVE LANGUAGE BEHAVIOR:
SEMANTIC, SYNTACTIC, AND PHONOLOGICAL

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
I. SEMANTIC LEVEL		
Kirk, S., McCarthy, J., and Kirk, W.	Auditory-Vocal Association Subtest, The Illinois Test of Psycholinguistic Abilities. (Rev. ed.) Urbana: The University of Illinois Press (1968)	Gives an expressive measure of word-association ability.
Kirk, S., McCarthy, J., and Kirk, W.	Vocal Expression Subtest, The Illinois Test of Psycholinguistic Abilities. (Rev. ed.) Urbana: The University of Illinois Press (1968)	Measures the quantity of expressive verbal concepts for describing four objects.
Lerea, L.	The Michigan Picture Language Inventory. Ann Arbor: The University of Michigan Press (1958b)	Test battery includes an expressive naming vocabulary for ages 4 to 6 years.
Love, R.	Oral language behavior of older cerebral-palsied children. J. Speech Hearing Res., 7, 349-362 (1964).	Describes procedures for using the first 55 words of the Peabody Picture Vocabulary Test, Form A, as an expressive naming test, appropriate for children from 18 months to 5 years. It also describes a vocabulary definition test involving 39 words from the same source, suitable for children 5 years old and above.
Terman, L., and Merrill, M.	Vocabulary Test, Stanford-Binet Intelligence Scale (Form L-M). Boston: Houghton Mifflin Company (1960)	May be used to assess vocabulary definitions.
Wechsler, D.	Vocabulary Subtest, The Wechsler Intelligence Scale for Children. New York: The Psychological Corporation (1949).	Vocabulary definitions on vocabulary subtest may be scored on a three-point scale.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
II. SYNTACTIC LEVEL		
Berko, J.	The child's learning of English morphology. In S. Saporta (Ed.), Psycholinguistics. New York: Holt, Rinehart & Winston (1961).	A test to assess ability to express morphological rules.
Berry, M., and Talbott, R.	Exploratory Test of Grammar. 4332 Pine Crest Road, Rockford, Ill. 61107 (1966)	A morphological test based on Berko's test above.
Lee, L.	Developmental sentence types: A method for comparing normal and deviant syntactic development. J. Speech Hearing Dis., 31, 311-330 (1966).	A tool for assessing levels of syntax from earliest stages to development of early transformations.
Lee, L.	Expressive section, The Northwestern Syntax Screening Test. Evanston, Ill.: Northwestern University Press (1969)	Appraises syntax and morphology from ages 3 to 8 years.
Lee, L., and Canter, S.	Developmental sentence scoring: A clinical procedure for estimating syntactic development in children's spontaneous speech. J. Speech Hearing Dis., 36, 315-340 (1971)	A method of scoring complete sentences to determine syntactic development.
III. PHONOLOGICAL LEVEL		
Fisher, H., and Logemann, J.	The Fisher-Logemann Test of Articulation Competence. Boston: Houghton Mifflin Company (1971).	Records production of phonemes allophonically and analyzes them in terms of errors of manner and place of production. Emphasizes analysis of geographic and socioeconomic class dialects.

AUTHOR(S)	REFERENCE SOURCE	BRIEF DESCRIPTION
Goldman, R., and Fristoe, M.	Goldman-Fristoe Test of Articulation. Circle Pines, Minn.: Ameri- can Guidance Service, Inc. (1969)	Tests phoneme proficiency in words and sentences and in con- ditions of maximum oral-visual stimulation.
Templin, M., and Darley, F.	The Templin-Darley Tests of Articulation. Iowa City: Bureau of Educational Research and Service, The Uni- versity of Iowa (1969)	Characterized by age-graded norms for articulation profi- ciency, provides data for ages 3 through 8 years.

APPENDIX B

Reading Checklist

From: Braun, C. & Froese, V. (Eds.) An Experience-based Approach to Language and Reading. Baltimore: Univ. Park Press, 1977.

- | | <u>Seldom-</u>
<u>Never</u> | <u>Usually</u> | <u>Always</u> |
|---|--------------------------------|----------------|---------------|
| A. WORD RECOGNITION | | | |
| I. Sight vocabulary | | | |
| 1. Recognition | | | |
| a. Recognizes most words taught | | | |
| b. Recognizes interesting content words | | | |
| c. Recognizes polysyllabic words | | | |
| d. Recognizes functions words (articles, conjunctions, prep.) | | | |
| 2. Identification | | | |
| a. Identifies most words taught | | | |
| b. Identifies interesting content words | | | |
| c. Identifies polysyllabic words | | | |
| d. Identifies funct. words | | | |
| B.- WORD ANALYSIS | | | |
| I. Phonic | | | |
| 1. Recognition - integrates auditory and visual skills in recognizing | | | |
| a. Beginning consonants | | | |
| b. Final consonants | | | |
| c. Beg. conson. clusters | | | |
| i) Double | | | |
| ii) Triple | | | |
| d. Rhyming elements | | | |
| e. Lax vowels | | | |
| f. Tense vowels | | | |
| g. Consonant diagraphs | | | |
| 2. Identification (same as (1)) | | | |
| II. Structural | | | |
| 1. Recognition - integrates vis. and aud. skills in recognizing: | | | |
| a. Compound words | | | |
| b. Base words and inflectional endings (tense, number, etc.) | | | |

Seldom-
never

Usually

Always

- c. No. of structural elements
in a word (wd. pt. families)
- d. Base word and affixes
- e. Contractions
- f. Possessives

- 2. Identification
(Same as above)

III. Semantic-Association Context Clues

- 1. Identifies wds. from associations
of surrounding meaning clues:
 - a. Comparison-contrast
 - b. Synonyms
 - c. Summary
 - d. Mood
 - e. Familiar expression
 - f. Classification
 - g. Familiar experience
 - h. Simile

IV. Syntactic-graphic context clues

- 1. Identifies wds. from their syntactic-
graphic clues:
 - a. Position in sentence
 - b. Function of word
 - c. Punctuation
 - d. Typographical
- 2. Recognizes functions wrds. as
organizat. clues.

V. Phonic-structural-content integration

- 1. Identifies wds. by combining
semantic, syntactic, and phonic-
structural elements.

C. COMPREHENSION SKILLS

I. Literal

- 1. Recognizes
 - a. Details
 - b. Main ideas
 - c. Relationships
 - i) cause-effect
 - ii) space/place
 - iii) sequence

- 2. Identifies
(Same as 1.)

Seldom-
never Usually Always

II. Inferential-uses implied into to:

1. Predict outcomes
2. Identify cause/effect relationships
3. Identify space/place relationships
4. Identify time relationships
5. Identify sequence

III. Evaluative-uses info. to:

1. Distinguish fact from fiction
2. Make judgments
3. Recognize author's purpose
4. Recognize propaganda techniques

IV. Interpretive - uses inf. to:

1. Draw conclusions
2. Identify emotional tone
3. Identify character traits

D. STUDY SKILLS

I. Locational - is able to:

1. Arrange words in alphabetical order
2. Apply alphabetic knowledge in locating info. in dictionaries, indexes, etc.

II. Organizational - is able to:

1. Recognize that headings and subheadings reflect organization
2. Apply knowledge to main idea and detail relationships to outline
3. Apply knowledge of main idea and detail relat. to summarize
4. Apply knowledge of main idea and detail relat. to take notes
5. Synthesize info. from 2 sources

III. Table-graphic skills - is able to:

1. Identify purposes
2. Identify details
3. Make summary statement

IV. Skimming - scanning -is able to:

1. Set purposes for reading
2. Skim a passage
3. Scan a passage

APPENDIX C

SUGGESTIONS FOR DEVELOPINGINNER VOCABULARY, LANGUAGE USAGE, AND WORD RETRIEVAL

Some children have problems developing and using an inner vocabulary and have difficulty with language and word retrieval. The following are some suggested activities for facilitating expressive and receptive vocabulary skills.

Walk about the house with the child and see how many items he can name. Concentrate particularly on words that are not used frequently, such as the teeth of a comb, the bristles of a brush, the rungs of a ladder, the risers on the stairs. Do the same outside and at various types of stores. This can also be done using picture books and magazines.

To help a child learn to categorize and eventually to generalize, make a scrapbook of different kinds of snakes, and then incorporate it into a scrapbook of reptiles. An even simpler activity for this purpose is to have the child name the rooms in the house.

Play a game with the child to see how many farm animals he can name, how many wild animals. "What animals would we find in a zoo?" See how many fruits you can name - how many vegetables, meats, or types of furniture. "What furniture would we find in a living room, a bedroom, a kitchen, on a porch?" Make scrapbooks and label each item. For example, have the child label the items that would be found on a farm - the animals, the machinery, the buildings. Have him identify the appliances that would be found in a store, the foods that would be ordered in a restaurant, the clothing that would be worn for various occasions. Draw or cut out and paste the pictures.

Show the child a picture of an object and have him name the object and then incorporate it into a sentence, a story, or a picture showing the use of the object.

The following method can be used to help the child learn to categorize and to generalize a word. Teach the child the word "trunk." Take him outside to show him a tree trunk and have him feel it. Take him to a store and show him a steamer trunk. Have him feel the trunk and repeat the word. Take him to the zoo to observe, and, if possible, feel an elephant's trunk. Find pictures of the three kinds of trunks in magazines, and have the child cut them out or draw them. Label each of the pictures or drawings in lower-case letters, capital letters, and cursive writing. Have the child walk the word trunk in the sand, the water, and on the carpet. Print it with a wet paint brush on his skin, and have him print it with his index finger and with a stylus in a clay pen. A word with more than one syllable can be said as the syllables are tapped on the skin, stamped with the foot, or pounded on a drum. Have the child write the word on the blackboard in large letters.

Teach the child a word such as "table." Have him feel tables of all sizes. Have him sit on the table, climb under the table, make a table from plasticine, draw a table.

Teach words denoting position, such as "under," through visualization and action. The child crawls under the table, under the bed, under a chair. He puts a toy under furniture. The mother says, "Timmy, fetch the spoon, it fell under the table." As with the exercise described above (using the word "trunk"), help the child to internalize the word "under" by using the various sensory modalities. This activity can be used to teach other words, such as "over," "inside," "outside," "on top of," etc.

The words "kneeling," "squatting," "tiptoe," "crawling," "wiggling," "rolling," "hopping," "jumping" can be taught with the child performing the activity, or he can make plasticine figures, pipe-cleaner figures, or Flexies perform the activity. Again, as above, utilize the various senses in internalizing the word.

The parent omits words as he reads a poem, a sentence, or a story. The child supplies the missing words.

Play the games "I Spy with my Little Eye," and "Coffee Pot."

The parent makes an analogy and the child finishes it. For example: "As sky is blue, grass is ____." "As water is wet, sand is ____." "As sandpaper is coarse, silk is ____."

When the family travels by car, see how many things that are seen can be named.

The child looks at a picture and describes the noun, the verb, or the emotion that the picture illustrates (e.g. running, father, sadness). The child tells or writes a story about the picture.

The child helps the mother cook. He names the utensils used - the teaspoon, the tablespoon, the measuring cup, etc. He learns the name of the activity he is performing - slicing, paring, coring, peeling, hulling, marinating, etc. Similarly, he helps the father with household repairs where, in addition to gaining in language enrichment, he will also get helpful exercise in fine and gross motor activities and in eye-hand coordination.

Pretend you are people in various strata of society, and enlarge the child's vocabulary by using words that would be relevant to another way of life.

Have the child taste a wide variety of foods and describe them. For example, peanut butter is thick and sticky, jam is sweet, soup is hot, mustard is strong, oatmeal is mushy.

Have the child smell various things, such as foods and spices, perfumes, gym clothes, etc., and describe them. Have him close his eyes and guess what foods he is smelling or tasting. Have him tell why he made the guess that he did.

Have the child feel a variety of things in the house. Have him describe the feelings. For example, appliances and cold and smooth, a

fur coat is soft and smooth, sandpaper is coarse, knives are sharp, water is hot and wet, etc. Have him close his eyes and guess what he is feeling. Have him describe the feeling and justify the guess.

Have the child listen to household sounds, guess what the sound is, and describe it, e.g. water running, the typewriter clicking, the sounds made when mother is cooking. Have the child guess what the sounds are that he hears on the street. Have him describe these sounds. Tape other common sounds such as an airplane, a train, church bells, a streetcar, birds singing, a dog barking, a policeman's whistle, a car horn, etc. The child guesses the sound, describes it, and makes a picture of a scene in which the objects making the sound are included.

The parent draws a series of pictures describing a story then tells the story to the child. The child repeats the story and then places the pictures in sequence to depict it. A variation is for the parent to show the child pictures, and the child invents a story to correspond with the pictures. The pictures are then scrambled and the child arranges them in sequence to tell the story.

Look through a catalogue with the child. The child selects the item he would like most to have, describes it, and describes the way in which he would use it. He then draws a picture of the way in which he would use it.

The child cuts pictures from a catalogue and sorts them into categories. Items in each category can be placed in envelopes or pasted in scrapbooks and labeled.

Have the child think of the food he would most like to eat, describe it, and draw a picture of himself eating that food. Do this also with toys and clothes.

Place objects of one category in a paper bag. Categories that can be used are money, toys, fruits, vegetables, cutlery, geometric shapes, etc. The child reaches into the bag without looking, describes the shape of the object he feels, and guesses its name. He removes it from the bag to see if he is right and describes additional characteristics that can be seen, such as the colour of the object. If the object is edible, the child is allowed to eat it.

The child closes his eyes and the parent places a variety of objects in his hands. The child feels each object, guesses what it is, and describes it.

The child closes his eyes and the parent puts objects of different textures and temperatures on various parts of his skin - the soles of his feet, his inner arms, his back. The child describes the feeling and guesses what the object is. Indoors, one can use a hairbrush, silk fabric, sandpaper, felt, a feather, etc. Outdoors, one can use grass, stones, sand, and water.

CONCEPT FORMATION

Several of the activities on the preceding pages are designed to assist in the development of concept formation. The following are some additional suggestions.

If a child has difficulty understanding family relationships, a pliable dollhouse-sized toy family can be purchased and the dolls given the names of members of your family. Make or buy furniture to scale, and act out familiar daily routines and special events. This is also one method whereby you can set out forthcoming events, helping the child to visualize and structure them so that he will be less anxious when the actual event occurs. As he becomes capable of understanding relationships in the immediate family, other relationships can be introduced by adding dolls that are given the names of grand-parents, aunts, uncles, cousins, etc.

Additional reinforcement of family-relationship concepts can occur through verbalization. "Mrs. Smith is Jimmy's mother, and Mr. Smith is his father. They all have the same last name - Smith. Gary Smith is Jimmy's brother. Who is Gary's mother? Who is Gary's father?" "A married woman is called Mrs. Is your teacher called Mrs. or Miss?" Animals can also be used to teach family-relationship concepts. Teach only one concept at a time.

Again using the doll family described above, act out problem-solving situations in which the child must solve the problem. Some of the problems might be, for example: What would you do if you came home and the house was locked; if there were a fire in the house; if you cut yourself; if the house were too hot; if someone offered you more candies than you could eat? As the child becomes adept at solving realistic problems of this sort, create atypical problems and have him solve them. For example: What would you do if you were on the moon and you kept floating because you were too light; if you could use only one hand and had to open a jar?

Dolls with sex organs can be purchased for the child who doesn't realize the difference between the sexes. Point out the difference in a matter-of-fact way. Talk about things mommies do, things daddies do, things men and women do, things boys and girls do. For example, with the child, try to think of the games teenage boys play, that teenage girls play. Play a game of dad's day at the office and of mother's day at home.

Familiarize your child with common metaphorical sayings, teaching him not to interpret them liberally, for example, "You can't have your cake and eat it, too," or "Don't try to kill two birds with one stone." Teach such sayings to the child one at a time, and help him to understand what they really mean.

Teach the child the type of answer people are seeking when they ask, "Do you like my hat?" Teach him the things he is expected to say and do in specific social situations.

Think of all the animals that fall under the category of insects, mammals, reptiles, etc. Make a scrapbook.

As the child gets older, teach him about different strata in our society, different religions, different philosophies of life, and different political structures.

Label each pocket of a shoebag with a different category, such as birds, dogs, cutler, etc. Make a series of "category cards" and label them with objects that belong to the various categories. Have the child sort the cards and put each one in the pocket labeled with the correct category.

Using the category cards, each player gets a stack of cards and the players trade cards in order to obtain a maximum number of cards in the category or categories they are saving.

Assemble a number of random objects. Describe various situations and ask the child what objects would be needed to handle each situation. For example, "If I went into a dark room, what would I need?" The child might select a light bulb, an electric cord, an electric switch, a candle, and so on.

FAMILY FUN

Many games can be devised in which the entire family can participate. Such games can be geared to the improvement of communication skills, or they can combine communications with body movement, directionality, or any other area of deficit.

Airport

One child pretends to be an airplane and another child is the traffic controller, "Traffic control" directs the landing procedure of the airplane verbally and with flashlights in either hand. "Fly right to Runway Number Four. Veer left. You've gone too far." The game can be varied by having the child who is the airplane hold a toy plane, moving it higher, lower, right, or left.

Family Radio Station

The child and the parents read the newspaper. The child simplifies the news stories, excluding any duplication. He holds a nightly broadcast in which he reports world and local news, school news, the highlight of the day, amusing incidents, and the weather. This "news report" can be taped on a tape recorder or broadcast through a cardboard tube or an intercom set.

Intercom

An intercom set is useful for a child who has difficulty communicating on the telephone.

Hide a Prize

One child closes his eyes and another child directs his movements. For example, "Walk five steps forward. You're too far right. In three steps you'll be going through a doorway." If the child with his eyes closed can successfully follow the directions, he will arrive at the prize.

Social Awareness Games

Society Tea. The children and possibly the mother dress in fancy hats and dresses. They have tea and cakes, behaving with impeccable manners and conversing elegantly and politely.

Teenager. The children dress as do teenagers and go to a pretend restaurant for a hamburger and a coke. They discuss the things they think teenagers would discuss.

Restaurant. The child makes a menu listing all of his favourite foods. The items must be properly spelled and placed in proper categories, i.e. drinks, sandwiches, etc. The child and the parent decide upon suitable prices for food, based upon cost and profit. For several days, the child orders food from the menu, adds up the cost of the food, and pays the cost, plus tip. If there is more than one child, they can take turns being the waiter and the customer. The waiter serves from the left and is always courteous to the customer.

Games such as those suggested can be conceived and expanded to cover innumerable situations. The children can play hobo, sailor, soldier (including marching left, right, forward, backward), musician, cook, etc. The process of acting the various parts will help the child to become more aware of persons in a variety of social or career situations. He will begin to perceive the actions and requirements of persons in many different positions or situations.

WHAT CAN BE DONE AT HOME

A common problem of most children with learning problems is the lack of proper organization. The skill to organize is basic and enables a youngster to develop a logical approach and a sense of self-reliance important to the child and hence, to any program of instruction. A degree of structure at home is most important in this respect. A schedule of various activities might include a homework period, a household job period, a preparation period, and a bedtime period. These periods involve only a small part of the total day, and care must be taken not to overload.

Homework may be done after school, before dinner, or after a T.V. program. Let the youngster choose; it is his option. Once a time period has been established, it must be kept. The L.D. child finds safety, comfort, security, and reassurance from the reliability of enforced organization, even though he may balk at times.

A "preparation period" is a specific time when all materials are checked by parent and child in readiness for the next day. A folder of some sort is necessary to place all materials together. After everything is checked, it is placed in the case ready to be taken to school. This virtually eliminates last minute confusion.

A household job is helpful in earning an allowance and developing responsibility. Rigid structure need not apply to this as it does to the other activities. It should be introduced only after substantial progress is shown in the other activity levels. It should be something the child likes and should be of short duration. It is not wise to create resistance when developing organizational skills.

The home can provide the variety, the repetition, the relevance that a remedial program needs. Parents can make mealtime, bedtime, a drive in the car, a trip to the supermarket, and ordinary household activities into meaningful teaching situations. If a mother or father takes the trouble to teach systematically some of the skills involved in cleaning, cooking, shopping, and gardening, there is an opportunity to develop finger dexterity; to strengthen visual and auditory perception; to teach order, logic, and arithmetic; to sharpen a child's ability to use language; and to help him direct and organize his experience. Involvement in the life of the household gives a feeling of competence that can help to counteract the sense of failure instilled by low marks. It also takes some of the load off the mother.

Parents should not be afraid to get involved directly with the academic skills. If a child has a serious learning disability, he is going to need more than a few remedial sessions a week to overcome it. However, there is one caution parents must observe--there must be total coordination and co-operation between the remedial program designed by the learning disability teacher and any supplementary educational help given at home.

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With the help given at home, the child receives the needed extra training which is bound to have some positive effects on his learning. Another side benefit received from parental help is that the parents actually become aware of the child's learning problems and his potential to learn, thereby giving a much better understanding and insight into the entire problem. Parents can give interesting assignments for learning. Following are some specific ideas in different areas:

Reading:

Make it a print-saturated world. Introduce the child to crossword puzzles; supply plenty of comic books; play Scrabble or Spill and Spell. Give work to do that forces him to cope with the printed word. Depending upon his level of competence:

1. Have him cut out one specific type of ad found in a magazine (e.g., all automobile ads).
2. Have him circle one particular word found on a page in a newspaper (e.g., every "the").
3. Have him check the T.V. listings and make a list of programs he wants to watch.
4. Make a list of friends and relatives and ask him to look up their phone numbers.
5. Give him part of the grocery list to track down in the supermarket, equipping him with trademarks or labels if he cannot read the words.
6. Leave him notes. Include messages that call for following directions ("Get an ice cream bar from the freezer") as well as messages from which he must get information ("Supper will be by candlelight").
7. Encourage some type of collecting (rocks, stamps, coins, etc.) or making models--both are activities to make him look sharp. Try to involve him in a hobby that will require some reading for information or direction. For an older child who likes music, get words to hit tunes so that he can read along with the record or tape--what else combines vocabulary, insidious repetition, and a steady beat?

With children who are reading for pleasure, there is a continuous broadening of their language development. They are exposed to a wider range of vocabulary and sentence structure than they may meet in normal conversation. There is no need to deny this to the child who cannot yet read on his own. Read aloud to him, no matter how old he is.

After he has learned to read a little himself, don't assume that he should now do his own reading. The books he can read alone may be boring. He may not read quickly enough or easily enough to make it pleasurable. He may never get addicted to books unless his parents keep him enthusiastic by reading exciting stories--on par with his age level, not his reading level. If it is a mystery story and is exciting enough, he may find it worth the struggle to read ahead to find out who did it.

Read poetry for the sense of rhythm and rhyme it develops. Read text books to help him keep up with the rest of the class in geography, history, or science. Don't feel confined to uplifting reading matter. Find out what his friends are reading, and read aloud from horror stories, science fiction, Sports Illustrated, Mad Magazine, or whatever will help him to share the interests of children his own age.

Language Arts:

The ability to listen and pay attention to what is being said is essential for school children. Three main kinds of directions that the child should learn to respond to are:

1. Those that encourage active listening such as "Sit down," "Take off your hat," and "Turn off the T.V., and come and eat."
2. Those that give practice in telling left and right. When the child knows which hand he uses to write with, he is ready to begin directions using left and right. Examples of this type of listening are "Raise your right hand," "Hold the apple in your left hand," and "The socks are in the left drawer."
3. Those that sharpen recognition of sound. Examples of this type of listening is to ask for sounds of specific objects and words. Rhymes are excellent.

Following are some other activities to build listening skills.

- a. Have the child listen to the radio for specific information, the weather forecast, items on sale, and time and then tell you what he heard.
- b. Have the child listen to short songs and story records and tell you what he remembers. Help him to remember the order of events as he becomes better in recalling.
- c. Have him listen for sounds in the house like the washing machine, dryer, door bell, refrigerator, or furnace and try to determine what is making the sound by location and type of noise.
- d. Have him remember phone numbers and dial them for you. Have him answer the phone and identify common voices and messages.
- e. Have him remember and deliver short messages for you.
- f. Read stories to the child, especially at bedtime. Then let him retell the story. Read very short stories with many pictures at first, working toward longer books where you will read only a section a day. The longer books give the child an opportunity to recall what happened in the story on previous days.
- g. Below is an example of teaching a child to dress himself. It may be necessary to give directions one at a time, gradually working up to two, three, and four things at a time. Always be positive, repeating directions when necessary. Use this same method of breaking down tasks until your child can learn them.

"John, it is time to put your pants on."
 "Here, I have put them on your bed."
 "This is the zipper. It goes in front."
 "In front means the same side of your body as your face."
 "Now sit on your bed."
 "Pick up your pants."
 "Put this leg into this leg of your pants."
 "Put your other leg in your pants."
 "Stand up."
 "Zip up your pants."
 "Now snap them."
 "That was a terrific job!"

The ability to label objects and activities builds word meanings or vocabulary. Following are some activities to build vocabulary.

1. Have the child name objects around him and the things he does. Here is an example:
 "This is a rolling pin. See how it is round like a glass. Watch how I can flatten the dough by rolling over it. Here, you try. What are you doing?"
2. Present new words to the child whenever you are riding in the car, shopping, in a new place, or looking at books. Play games like "Who can tell me the most things about this rock, or flower, or shirt?"
3. The kitchen is an excellent place to learn labels. The child can feel, see, and hear words like chopping, grating, cutting, stirring, and peeling. He can experience hot, cold, smooth, lumpy, rough, frozen, thick, thin, syrupy, liquid, powder, and many others. The sense of taste can also be utilized to teach words like sweet, sour, salty, and bitter. He can use his sense of smell to help remember names of many things.

Relating or understanding the connections between events or things may be very difficult for your child. Following are some suggested activities that may help.

1. Discuss cause and effect ideas on T.V. and in the stories you read as well as in the events in your daily life. Ask questions like "Why did that happen?" and "What do you think will happen next?"
2. Be sure the child understands the cause and effect relationship in the discipline he gets. "You can't go outside to play until the toys are put away." "You put the toys away; now you can go outside."
3. Relate past, present, and future by asking "why" and "what if" questions.
4. Play games and have the child do tasks with relationship words. "Put the spoon in the sink." Here are some relationship words to practice. You will be able to think of even more.

up
 down
 into
 between

before
 after
 beginning
 middle

when
 whenever
 while
 meanwhile

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inside	end	toward
outside	warmer	away from
around	colder	farther
through	more	further
behind	most	near
above	less	but
beneath	least	or
over	last	for
all	then	neither
some	next	nor
opposite	because	both

Classifying is being able to understand why things are in the same or different groups. It is usually easier for the child to see differences than to see how things are alike. Below are some activities to help a child learn to classify.

1. Play games like "Find all the blue things" or "Find all the things you can eat" or "Name all the things in the room that are machines."
2. Have the child put away groceries. Say "Put all the cans in the cabinet," or "Put all the boxes on the shelf."
3. Have the child sort laundered clothes. Tell him to put the towels in one stack, the wash cloths in another, or to match the socks.
4. Have him weed the garden. Show him a plant, and tell him to leave only the plants that look like that. Be certain you wait to see that he can determine which ones look like the particular plant.
5. Play games when riding in the car. For example, "Let's count all the animals, white houses, green signs, or big trucks."
6. Explain the idea of family. Talk about the members of the family. When the child is certain of these members then play a "fooler" game. "That firetruck is in our family. No! I thought I could fool you. You are too smart. You knew the firetruck wasn't in our family." Expand outward to include other families and then to things like plants, animals, food, and buildings. You might want to make scrapbooks of things that go together.
7. Stress colour concepts by telling the child to put on his green and white shirt, or to bring you the red towel, or to put on his black shoes.

Comprehension refers to the child's ability to understand or recognize the meaning of his senses. A child can gain an understanding of what he senses by discovery for the formation of new concepts and by recognition or the recall of concepts already committed to memory. School activities are mostly verbal. In order to understand what is going on the child must have learned to generalize ideas and to associate names with their generalizations. Following are some activities for developing comprehension.

1. Conversation on a variety of subjects is perhaps the most effective way to expand a child's listening vocabulary. Don't use baby talk, and be sure the child has an opportunity to express himself.

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2. Expose your child to books by visiting libraries, taking books home, and reading to him on subjects of special interest. Read simple short stories. Ask questions about the story.
 - a. "What did the story tell?"
 - b. "How do you know what colour hair Goldilocks had?"
 - c. "Where in the story did it say it was a nice day?"
 - d. "What happened first, next, and at the end?"
3. Play all kinds of simple riddle and puzzle games, "I am thinking of something you can ride that has two wheels and a motor." "I am a pet. I have four legs and go 'Meow, meow!'"
4. Play definition games. "What is very cold, made from milk, and is good to eat?" "What is another word for pretty?"
5. Jokes have subtle meanings. Joke books for children are fun, help the children to develop comprehension, and make social situations easier to understand.
6. Play a likes and differences game. "How are a ball and a balloon alike or different?" "How are trains and planes different or alike?"
7. Play guessing games. "I sell medicine, I am a _____. " "I fix broken pipes. I am a _____."
8. Find a picture in a magazine or book. Have the child explain and/or draw what happened before, or what will happen next. Ask him and other members of the family to draw pictures and act out or pantomime stories about those pictures.

All the above games are good time killers and are particularly good when driving, when waiting in the doctor's office, or when it is raining. The games can also be played with other children in the family or friends.

Arithmetic:

Arithmetical concepts usually require some formal training, but the parents can do much to help the child understand numbers. Most parents begin by teaching their children to count. Counting familiarizes children with the sounds of numbers and also teaches them that numbers belong in a definite series in which each number has its own position.

After learning to count, the child may be taught to associate the spoken number with the correct quantity of objects. This association process takes time and much practice. Start simply: "We have one dog." "Here are two pencils." "I am holding up three fingers." An abacus is helpful for teaching children numbers 1 to 10. Parents may ask the child to find the row with five or the row with nine. The child is able to visualize the relationships of the rows and to see their approximate positions in the series of 1 to 10. Other visual devices can be constructed by the imaginative parent to help the child develop number concepts.

Quantitative concepts are related to arithmetic concepts. Parents should help their children to recognize quantitative relationships such as "Which is bigger (longer, nearer, heavier, darker, more, etc.)?"

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I. AT HOME

- A. Kitchen concepts. The kitchen is a wonderful place to build math concepts.
1. Baking or cooking gives many opportunities to teach math. Have the child use a measuring cup and measuring spoon. Introduce $\frac{1}{2}$, $\frac{1}{4}$, one whole teaspoon, and one tablespoon. Demonstrate what they are. Let the child also show you.
 2. Have the child measure three cups of milk for a recipe and count out loud as he pours.
 3. Introduce one dozen and one-half dozen--eggs, apples, oranges. Count it out. Let the child count.
 4. Introduce words like "more" or "less." "We will use less milk than sugar." "Which is more, half or whole?"
 5. Recognize number and shape.
 - a. "Find more than one of something similar, such as two chairs, three pots, four spoons."
 - b. "How many things can you find that are round?" Examples: clock face, telephone dial, plate.
 - c. "How many things can you find that are square or rectangular?"
 6. Use the terms longer and shorter. "Is the cucumber longer than the carrot?"
 7. Recognize comparative size. "Is this apple larger or smaller than this one?"
- B. Dinner preparation. While you prepare dinner, have the child utilize his time constructively.
1. Allow the child to set the table. How many forks, spoons and knives are needed? Have the child count out loud as he takes out the utensils or places them on the table.
 2. Ask the child to evenly divide cookies or muffins among the family members.
 3. While you prepare the dinner, keep the child busy with:
 - a. Counting beads while stringing them.
 - b. Counting blocks while using them in various constructions.
- C. The clock. The young child may not be able to tell time yet, but the awareness of time is important. Use sentences describing morning, afternoon, and evening activities and concepts.
1. Eight o'clock - breakfast.
 2. Nine o'clock - school.
 3. Eleven o'clock - playtime.
 4. Twelve o'clock - lunch
 5. Four o'clock - playtime.
 6. Six o'clock - dinner.
 7. Eight o'clock - bedtime.

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- D. Sorting laundry.
 1. Count socks, explain pairs. Have the child touch the objects as he counts.
 2. Let the child put his own clothes away. Ask, "How many clean socks are you putting in the drawer?"
 3. Make a laundry list. Let the child help you check the laundered items against the list.
- E. Other home activities.
 1. Ask questions of comparison. "Who is bigger, Daddy or Brother?"
 2. Stories like The Three Bears and the Three Billy Goats Gruff emphasize size. Read them to the child.
 3. Play a game of dominoes (you may make the game with shirt cardboards). Have the child match like dots to each other.
 4. Simple card games can be played if playing cards are available. Even if the child is unable to say the right number, if he recognizes the shapes it helps in number readiness.

II. AWAY FROM HOME.

- A. When shopping.
 1. Let the child help with the shopping--have him get two cans of soup, or six bars of soap, or half a dozen oranges.
 2. Discuss money value--pennies, nickels, dimes, and quarters. Teach him that five pennies equal one nickel. Teach him the price of articles you purchased.
 3. Compare the size of items you are buying. Ask him to get the large one (or small one) from the shelf.
- B. When riding a bus or car.
 1. Tell the child to count the number of trucks he sees.
 2. Have him count red, or green, or white cars.
 3. Have him find license plates that start or end with a specific number.

Listening:

The ability to listen and pay attention to what is being said is essential for school children. The child must learn to follow directions.

Three main kinds of directions in which the child should learn to react are as follows: (1) those that encourage active listening, (2) those that give practice in telling left from right, and (3) those that sharpen recognition of sounds. The preschool child should be given experience with these three kinds of directions as well as with language and life in general.

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When the child can react correctly to very simple requests, he is ready for directions that encourage active listening. The parent should begin with simple, one-step tasks. For example, "Please, take off your hat." Then more complex one-step tasks may follow. A more complex direction might be "Take this book to Father." Finally, multi-step directions should be given. For example, "Wash your hands, and then set the table," or "Please, go to the basement, and see if the light is on."

When the child knows which hand he uses to write with, he is ready to begin directions that give practice in telling left from right. Once again, the parent should start with the simpler instructions and progress to more difficult ones as the child's understanding develops. For example, a simple task would be "Raise your right hand." A more complex task would be, "Hold your right ear with your left hand."

When the child will repeat words on request, he is ready for directions that sharpen recognition and discrimination of sounds. One such task would be for him to give the first and last sounds in a word. Say a word like "boy" and ask the child to say just the first sound in the word. Begin with simple words, and later add longer, less familiar ones. Rhyming is another way of sharpening sound recognition.

FUNCTIONAL WORDS AND PHRASES

Hi	Close it	Go get the ____
Bye-bye	Put it back	Fall down
Child's name	Put it down	Don't fall
Come here	Put it on	Family name
Come on	Put it in	(mamma, daddy)
Open the door, box	Get it	Move over, back
Close the door, box	Get down	Move it
Open it	Get up	Push it
Pull it	Don't cry	Ride the horse, car
Throw it	Sit down	It's broken
Shake it	Stand up	Blow it
Turn it	Give it to ____	Wash your hands
Up, down	Where is it?	Dry your hands
Fast, slow	Where's the ____	Throw it away
Fix it	Where's your ____	It's wet
Hurry up	Find it	It's dry
Get in your chair	Look for it	It's mine
Push the chair	Look	Where's your hearing
Don't touch it	Listen	aid?
Let's go	Show me the ____	Drink it
Let's go bye-bye	Show me your ____	Eat it
I see you	Stop	It's cold
Stay there	Jump	It's hot
Wait	Jump down	All-gone
Go around	Hold my hand	Thank you
Yes	Walk	You dropped it
No	Run	

BASIC VOCABULARY

bathroom	drink	how many
bell	dry	how old are you
big	eat	hurry
blocks	eraser	I
blue	fall	I did

BASIC VOCABULARY (continued)

book	find	inside
boy	fine	juice
box	first	jump
bye-bye	floor	kleenex
cabinet	flush	last
chair	four	lights
chalk	get	like
clock	girl	make
clothes	give	march
cold	go	me
come	good	mile
cookies	green	mine
counter	hand	more
cow	hat	no
cup	help	one
desk	here	open
door	hole	out
draw	horse	outside
own name	room	toilet paper
paper	run	turn
paste	sat	two
peg	school	umbrella
peg board	scissors	wait
picnic	sheep	walk
picture	sit	want
pig	snow	wash
please	soap	what
plurals	stand	where
put	sun	window
rain	table	yellow
rain boots	teacher	yes
raincoat	thank you	you
record player	three	
ride	toilet	